

Air Conditioning & Refrigeration News

The Newspaper of the Industry

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ASRE Program Is Set For Skytop Conclave June 9

Applications Problems To Be Probed At Morning Sessions

NEW YORK CITY—The twenty-seventh spring meeting of the American Society of Refrigerating Engineers, which will be held at Skytop Club, Skytop, Pa., June 9, 10, 11, will be marked by the formal induction of three new sections—those organized during the past year in Richmond, Pittsburgh, and Cincinnati.

The technical program, featuring the newest developments and practical information in commercial and industrial refrigeration and in air conditioning, will be held on Monday and Tuesday mornings, June 10 and 11. Each morning will include two two-hour sessions, with a short intermission between.

Afternoons will be left free for golf on the famed Skytop courses. Women guests at the convention who are not interested in golf will have excellent facilities for swimming, riding, and tennis at their disposal.

Entertainment will be started with an informal party at Skytop Club on Sunday evening, June 9, when a colored movie entitled "The Lore of the Poconos" will be one of the features. The usual A.S.R.E. golf tournament will be played off on Sunday, Monday, and Tuesday afternoons, and the society's summer dinner-dance will be held Monday evening.

R. E. Townsend of the Detroit Lubricator Co. is chairman of the entertainment committee; C. R. Logan, Superior Valve & Fittings Co., an old hand at A.S.R.E. social events, will assist him.

The technical program as announced by the program committee under L. L. Lewis of Carrier, chairman, is as follows:

SUNDAY, JUNE 9

3:00 p.m.—Preliminary golf tournament.

5:00 p.m.—Advance registration, committee meetings.

9:00 p.m.—Family party. R. E. Townsend, chairman; "The Lore of the Poconos," talk and colored movie. J. Herbert Walker, director of Tour-

(Concluded on Page 16, Column 2)

First Quarter Air Cooling Sales Up In Chicago

CHICAGO—Central-plant air conditioning systems sold in Chicago in the first quarter of 1940 registered an increase of 35% in number and 130% in capacity over the same period last year, according to figures compiled by Commonwealth Edison Co.

Contracts were awarded for 69 "artificial weather" systems, aggregating 2,995 hp., as against 51 plants, totaling 1,304 hp., in the first three months of 1939.

In addition to these central-plant air conditioning systems, Chicago dealers sold 44 electric room coolers in the first three months of this year, compared with 14 in the corresponding period of 1939.

March sales by dealers included 39 central-plant systems, aggregating 957½ hp., and covering 15 restaurants, nine retail stores, five general offices, three industrial applications, and two funeral parlors.

Eighteen room cooler sales also were reported during the month, this total representing 26 actual units. Four of the sales were to doctors' and dentists' offices, 11 to private offices, and three to residences. With

(Concluded on Page 6, Column 5)

N. Y. Water Curb May Miss Systems Under 25 Tons

NEW YORK CITY—With the discovery of a "joker" in the regulations issued by the New York City Department of Water, Gas & Electricity, it now becomes apparent that only air conditioning units of approximately 25 tons or more capacity will be affected by the new ruling of the department restricting the use of water in air conditioning systems.

Some members of the industry here who analyzed the regulations quickly found an extenuating word. The regulations forbid the discharge of waste of "more than the equivalent of 5 gallons of city water per minute annually." All systems using in excess of this amount must be equipped with some water conserving device.

It is the word "annually" which provides the loophole. At first glance it appeared as though the rule would involve the necessity of a water conserving for nearly every unit throughout the city, for only units of 3 tons capacity or smaller would apparently consume less water than the minimum amount. However, since the cooling or heavy water consuming part of the air conditioning system is used only 4 to 6 months out of the year, the water

(Concluded on Page 11, Column 2)

Philadelphia Sales Up 42% In '39

PHILADELPHIA—Sales of household electric refrigerators in this territory registered a gain of 42% in 1939, totaling 57,538 units as compared with 40,391 in the previous year, according to reports of dealers to the Electrical Association of Philadelphia.

Average retail price dropped from \$176 in 1938 to \$172 last year, while retail sales volume went up 38%, from \$7,111,234 in 1938 to \$9,881,158 last year.

Sales by Philadelphia Electric Co. totaled 6,698 units during last year, a jump of 108% from 1938, when utility sales totaled 3,223 units. Average price of sales by the utility also gained, standing at \$215 for 1939 against \$195 for the preceding year.

Highest monthly sales mark was reached during June, when 9,374 units were sold, an increase of 158% over the same month of 1938, when sales were 3,623 units. April was 1938's best month, with 5,861 units.

All 1939 months except April were above the corresponding period of the preceding year. That month last

(Concluded on Page 6, Column 5)

Morley Manages Norge Detroit Manufacturing; Kanker Named Director of Range Sales

DETROIT—Herbert Morley has been appointed manager for all Detroit manufacturing units of Norge.

Mr. Morley has been manager of the heating and air conditioning division, being responsible for engineering, manufacturing, and sales. To his duties will be added the manufacturing management of the aircraft parts division and the hermetic Rollator compressor division, as well as special gears and transmission parts.

He was one of the five-man group brought from the Canadian Products division, General Motors of Canada, in 1923 to take over the operation of the Detroit Gear & Machine Co., and later form the Norge company.

At various times since, he has been in charge of engineering, research, and manufacturing for Norge divisions in Detroit and Muskegon, Mich.

Niagara Power To Widen Scope Of 'Nickel' Plan

5-Cent Meter Campaign Needed To Reach New Prospects, Skinner Says

BUFFALO—The "Economy Purchase Nickel Meter Plan" is to be made available to all the dealers in the Niagara Frontier area, according to an announcement made by Merrill E. Skinner, vice president of the Niagara Electric Power Corp., which sponsors the plan, in addressing 500 dealers and salesmen at a refrigeration rally put on April 19 by the Electrical Association of the Niagara Frontier.

Mr. Skinner explained that the "nickel meter plan" is a community plan with the finance company, power company, and dealers all working together. The power company issues the meter, using its warehouse facilities as distribution points for these meters to dealers. The dealer makes no investment in the meter. The utility also performs a community collection service through members of its collection department. The finance company performs the delinquent collection service.

"If the dealers use this tool properly, there is plenty of business to be had," declared Mr. Skinner. "It eliminates competition on terms. It will reduce pressure for trade-ins and discounts. It encourages stepping up sales and you don't have to talk price."

The Niagara Power executive emphasized that it is important for dealers to make proper use of the plan. "Don't bait customers in with this idea and then try to sell them another way," he said. "And don't forget, the credit investigation on this plan will be just as rigorous as under any other."

Mr. Skinner said that "where we're

(Concluded on Page 16, Column 1)

ACMA Will Meet At Hot Springs May 10

HOT SPRINGS, Va. — Annual meeting of Air Conditioning Manufacturers Association has been tentatively set for the Homestead here, May 10 and 11.

Two other organizations whose interests include refrigeration and appliances will meet here during the month. Spring meeting of National Electrical Manufacturers Association has been set for May 12 to 17, and National Electrical Wholesalers Association will meet May 19 to 23.

March Sales Rise In Tennessee & Virginia, But Unit Price Drops

Knoxville Average \$147; Was \$176 Last Year

KNOXVILLE, Tenn. — Average unit price of refrigerators sold in the month of March by dealers reporting to Knoxville Electric Power & Water Board was \$147, compared to the average unit price of \$176 for all refrigerators sold during 1939. Total of 377 refrigerators were sold during March this year.

The average unit price of electric ranges sold during March was \$146, compared with the average unit price of \$156 for all ranges sold during 1939. Appliance totals for March were:

	No. of Units	Average Sales Price
Refrigerators	377	\$147
Ranges	154	146
Water Heaters	69	83
Washers	306	83
Ironers	10	89
Vacuum Cleaners	159	69
Radio	465	39
Table Cookery Appliances	257	4

Commercial sales for the month included nine commercial refrigerators, with an average sales price of \$639.

Virginia Dealers' Sales 250 Units Above 1939

ALEXANDRIA, Va. — Sales of electric refrigerators, ranges, and water heaters in the territory of Virginia Public Service Co. for the month of March showed substantial gains over sales for the same month last year. Unit sales of refrigerators (including commercial) for the month totaled 977, compared with 727 in March, 1939; range sales reached 108, against 88; water heater sales rose from 36 to 44.

Sales of these appliances in Virginia Public Service Co. territory for the first quarter of the year, as compared with the first three months of 1939, follow:

Appliance	First Quarter 1940	First Quarter 1939
Refrigerators (including commercial)	1,682	1,223
Water Heaters	65	66
Ranges	228	194

York Adds 600 Men As Orders Increase

YORK, Pa. — Six hundred men have been added to the factory force of the York Ice Machinery Corp. during the past six months to handle increased orders, relates York President Stewart E. Lauer.

Exclusive of sales to other manufacturers for resale, which account for a very small percentage of the company's total business, the corporation's sales for the six months' period ending March 31, 1940, exceeded the same period last year by 17.1%.

Among recent big jobs installed by York are a large absorption refrigeration system for special processing for Tennessee Eastman Corp. in their plant at Kingston, Tenn.; a giant turbo refrigeration compressor, driven by steam turbine for the Industrial Rayon Corp. at Painesville, Ohio—said to be the largest turbo refrigeration compressor ever built in the United States; a modern complete air conditioning system for the May Co. Department Store in Cleveland; and complete comfort air conditioning systems for F. W. Woolworth Co. stores at Springfield, Ohio, Utica, N. Y., and New Brunswick, N. J.

These contracts add up to a total of 4,200 tons of refrigeration. The business involves about a half-million dollars.

Congress Hears Dealer Attack On Chain Prices

Witness Flays 'Destructive Pricing' of Refrigerators By Big Retail Chains

WASHINGTON, D. C.—Claiming "destructive" price competition is being used by the chain stores against the independent electrical appliance dealer, Rivers Peterson, managing director of the National Retail Hardware Dealers Association, testified recently before the subcommittee of the Ways and Means committee holding hearings on the Patman chain store tax bill.

"We have it today in household refrigeration," said Mr. Peterson. "Early this year some manufacturers decided to place dealers in a little better competitive position against chain stores on refrigeration. They lowered their price, and immediately the chains lowered their price."

"They have them today at a figure, I understand, which is not particularly profitable to the chain organizations but it does not make much difference with them if they lose a few thousand dollars on refrigeration because they have so many lines, and so great buying power, and such great buying advantages that they can make it up on something else."

Another method, by which the chain stores get manufacturers to provide them with private brand appliances which are equal in quality to the manufacturer's nationally advertised brand sold by the independent dealer but which are priced at a figure the individual retailer cannot profitably meet, was related by Mr. Peterson.

"A leading electric iron with an established retail price of \$8.95 cannot be profitably sold for less by the independent retailer," said Mr. Peterson. "It has a nationally advertised heating unit. Then, the manufacturer provided a national chain with an iron of equal quality, containing the same heating unit, at \$6.95. They (the chain) explained

(Concluded on Page 6, Column 3)

Department Stores Lead Fight Against Bill Favoring Co-ops

WASHINGTON, D. C.—Legislation which would place the Federal government in the position of subsidizing a branch of industry was assailed here when the National Retail Dry Goods Association opposed provisions of a bill introduced by Senator Capper of Kansas providing for the organization and regulation of co-operatives.

Speaking for department and specialty stores throughout the country, Irving C. Fox, N.R.D.G.A. counsel, forwarded to the subcommittee of the Senate District Committee a brief containing the objections of retailers to any law which would permit cooperatives to operate tax-free, at the expense of the public purse.

The Capper proposal, Senate Bill No. 2013, permits an alleged cooperative organized under the act "to conduct its affairs within and/or without the District of Columbia" by paying only a small license fee of \$10.00.

"In other words, a cooperative organized anywhere in the United States can be tax free in so far as it is the intent, purpose, and jurisdiction of this act to exempt them," the National Retail Dry Goods Association

(Concluded on Page 16, Column 2)

Dealer's Credit Plan Has 'Death Benefit'

MINNEAPOLIS — A credit policy whereby purchasers of electric refrigerators will be given a paid-in-full receipt in the event the family provider dies was announced by Minneapolis House Furnishing Co. in a full-page advertisement publicizing its annual electric refrigerator show.

Free household gifts for all housewives attending the show also were promised, and free delivery of purchases was offered to any part of the state.

Another Minneapolis store, Boutell's, featured in its fifth annual refrigeration and home appliance show the fact that a popular local columnist would be present to "tell stories" and present free gifts.

'Cut-Price Selling' With A Promotional Purpose

STEVENS POINT, Wis. — The Prais Furniture Co. here utilized a unique stunt to publicize its sales of Stewart-Warner refrigerators by staging a one-day bargain plan in connection with which the price on a single unit was reduced \$1 every one-half hour from the time of the opening of the store at 9:30 a.m. until closing time at 9 p.m.

The starting price was \$112.95, and a clock in the store's window indicated the price as the time progressed during the day.

They Gave the Town's Biggest Party



Mr. and Mrs. Gaylord A. Palmer, owners of Palmer Electric Co., Norge dealership in Washington, Ind.

Bringing In the Prospects

Norge Dealer's 'Appreciation Party' For Friends In Town and Country Draws Record Crowd

WASHINGTON, Ind. — A crowd estimated at between 9,000 and 11,000 persons, largest ever assembled in the large community building here, helped Palmer Electric Co., Norge dealer, celebrate its seventeenth business anniversary with an afternoon and evening "Jamboree."

Held as a combination "appreciation party" for customers and for new-appliance prospects on recently completed rural electrification projects in the county, the Palmer Jamboree featured several radio vaudeville acts from station WLS, Chicago, as well as displays and exhibits maintained by distributors and manufacturers of products retailed by the firm.

An extensive newspaper, direct-mail, and handbill advertising campaign was used to publicize the event, topped by an eight-page special supplement in one local newspaper, five pages of copy and advertising in another, 5,000 invitations mailed to old customers and new REA line prospects, and 5,000 eight-page handbills, distributed throughout the territory.

Not content with this, the company followed up its "invitations in print" with telephone invitations to subscribers in Washington and surrounding communities. Some 4,000 special handbills also were distributed in parked cars to call attention to the \$500 in prizes which the company was offering in connection with the event.

This advertising drive was carried on about a week in advance of the Jamboree, reports Gaylord A. Palmer, who with his wife, Grace Waller Palmer, operates the dealership.

Although the celebration was planned to cover all of the products handled by the company, the largest tie-up was with Norge, since the company has been a Norge dealership for 11 years and these products constitute the bulk of its annual business volume. N. M. Forsythe and "Rube" Pizor were present from Norge headquarters to assist the Palmers in carrying off the event.

In addition to a complete display of Norge refrigerators, electric and gas ranges, and laundry equipment, Gould water systems and pumps, Farnsworth radios, and Westinghouse small appliances were shown. All of the equipment was in operation, so that new REA users might get a

better idea of its use value.

The \$500 in prizes awarded during the Jamboree included a 1940 Norge refrigerator, washer, and some 25 radios and small appliances. To be eligible for a prize, guests had to fill out a registration blank, checking the appliances they planned to buy during 1940.

This gave the company a valuable prospect list, especially among new REA customers, which, Mr. Palmer says, are "usually the ones hard to find."

One of the most impressive stunts staged during the Jamboree, in Mr. Palmer's opinion, was the handing out of lapel ribbon, imprinted "I am a Norge User," to all customers of the company who attended the affair.

At one point in the program, all these users were asked to stand, and the effect on rural prospects was evident, Mr. Palmer reports.

"Even some of our old customers remarked: 'My, we had no idea you had sold so many Norge appliances in this community,'" Mr. Palmer says. "The effect on new prospects and new users was evident."

Commenting on the effects of the promotion, he adds:

"From all indications, we have solved the problem of bringing together new and old users of appliances where they can be shown the advantages of the newer types of equipment. This type of advertising might be just the thing we dealers need to get in on this new business — on REA lines in general."

"Our salesmen are now following up on these newly acquired leads — and their calls aren't 'cold' ones, for they've something very definite to work on."

"This is just the kind of information the salesman wants. We believe it's better — and cheaper — than the cold canvass."

'Saturday Sales' Move Used Refrigerators

DALLAS, Tex. — Hart Furniture Co. is successfully featuring reconditioned refrigerators in one-day sales limited exclusively to used furniture and appliances of various kinds.

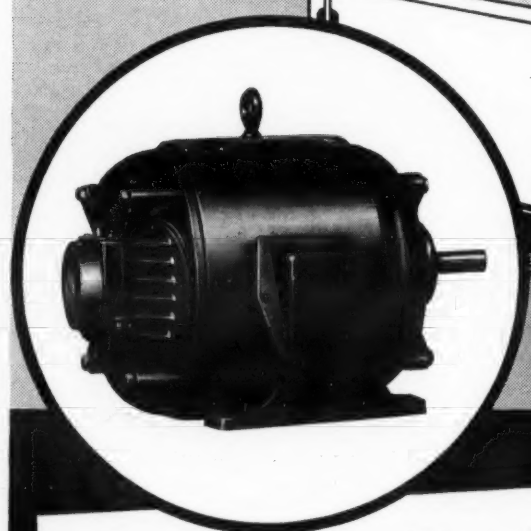
Sales are always held on Saturdays, and the store is kept open until 9 p.m. to accommodate buyers.

Mass Selling—An Example



Part of the crowd that jammed the community building in Washington, Ind. to help Palmer Electric Co. celebrate its seventeenth anniversary. White lapel tags denote Norge users.

Century Repulsion Start Induction Motors are ideal for refrigerated display cases.



Century Repulsion Start Induction MOTORS Assure Least Voltage Drop . . . Less Light Flicker!

A Real Advantage in Refrigerated Storage and Display Case Applications

• The high starting torque and low starting current of Century Repulsion Start Induction Single Phase Motors, assures least voltage drop and least light flicker during starting. These motor characteristics are a definite advantage to you and your customers because they eliminate this frequent cause of annoyance in refrigerated display case installations.

You'll find Century Type RS (Repulsion Start Induction) Motors improve the performance of refrigeration compressors, for they fully meet the starting, accelerating and running

requirements of this specialized application.

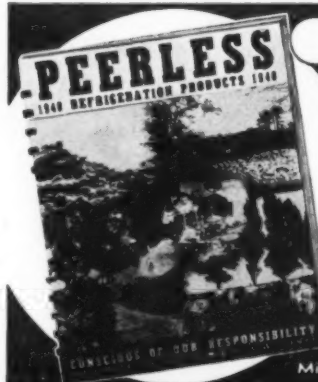
Century Repulsion Start Induction Single Phase Brush Lifting Motors are backed by over 37 years of proven ability to handle refrigeration compressors and other hard to start loads.

Your nearest Century Motor Specialist will gladly assist you in the correct selection and application of Century Motors. You'll find his experience extremely valuable — and it's yours for the asking.

CENTURY ELECTRIC COMPANY
1806 Pine Street St. Louis, Mo.
Offices and Stock Points in Principal Cities



One of the Largest Exclusive Motor Manufacturers in the World



YOU'LL FIND IT IN THIS GUIDE TO AMERICA'S MOST COMPLETE LINE OF LOW-SIDE REFRIGERATION EQUIPMENT

Peerless OF AMERICA INC.

Midwest Factory, General Offices — 515 West 35th Street, Chicago

DEDICATED TO Advancement IN THE REFRIGERATION INDUSTRY



The first in a series of messages of importance to each and every manufacturer of refrigerators—

TO advancement . . . to progress . . . we dedicate our contribution to the great home refrigeration industry . . . an industry ever alert to NEW thought . . . ever ready to test and accept and adopt . . . a BETTER WAY.

And so it is! A better way has been discovered for fabricating refrigerator shelves. Today you can equip *your* make of refrigerator with shelves of STAINLESS STEEL . . . because someone found out HOW to produce them . . . someone discovered a way to meet this crying need of the industry.

Gentlemen . . . we give you STAINLESS STEEL SHELVES by WALL WIRE PRODUCTS COMPANY . . . shelves of exquisite finish . . . shelves that will gleam and glisten through the years . . . shelves of PERMANENT lovely lustre . . . of jewel-like beauty.

Already the industry has accepted WWP STAINLESS STEEL Shelves . . . because they can be produced in any quantity . . . and delivered on schedule . . . because they can be produced economically . . . because the refrigeration industry KNOWS that the new higher humidity type of refrigerators demand this tarnish-proof, more hygienic, more durable interior accessory.

Will *you* keep pace with ADVANCEMENT in the industry? If you would . . . you have but to say the word . . . by letter, wire or phone, and one of our engineers will gladly meet with you to discuss your problems.

. . .

WWP STAINLESS STEEL Shelves also available to the COMMERCIAL REFRIGERATION industry and to the RANGE industry. Inquiries invited.



WALL WIRE PRODUCTS CO.

948 GENERAL DRIVE
PLYMOUTH, MICH.

SHELVES OF STAINLESS STEEL

- BUILT FOR THE REFRIGERATOR OF YOUR MAKE
- SHELVES OF PERMANENT JEWEL-LIKE BEAUTY

New Dealers

BARRON, WIS.

BARRON, Wis.—Alton Anderson has taken over the Norge electrical appliance store formerly operated by R. W. Cuthbert, who has retired because of ill health.

HOLLYWOOD, CALIF.

HOLLYWOOD, Calif.—James E. Finn, H. Van Gieson, and C. W. Monk, all of Los Angeles, have been named directors of the newly formed Household Refrigeration Corp., with headquarters at 8020 Melrose Ave., Hollywood.

CHARLOTTESVILLE, VA.

CHARLOTTESVILLE, Va.—Albermarle Maytag Co. is now selling Gibson refrigerators here.

EL CENTRO, CALIF.

EL CENTRO, Calif.—The C B H Refrigeration Co., 615 State St., has been organized with Harry G. Hoskins, Robert F. Cherry, and Jess F. Baker as officers.

BROOKNEAL, VA.

BROOKNEAL, Va.—Brookneal Motor Co. has been appointed full line General Electric dealer here.

WEST WRIGHTSTOWN, WIS.

WEST WRIGHTSTOWN, Wis.—Herman A. and Bernard Meuleman have announced the formal opening of their new electrical appliance store here. The new two-story building is modern throughout and fitted with fluorescent lighting.

ARLINGTON, VA.

ARLINGTON, Va.—Cherrydale Hardware Co. now handles Universal electric ranges and Pemco water heaters here.

FARMVILLE, VA.

FARMVILLE, Va.—Electric Equipment Co. has been named to sell the complete Frigidaire line here.

Salesmen's Shifts

GRAND SILVER, DALLAS

DALLAS, Tex.—E. E. Fischinger has been named floor manager in charge of electrical merchandise at the Dallas Grand Silver Store, replacing Leon Taylor who has been transferred to the company's store in Memphis, Tenn.

NORTH BELL, DALLAS

DALLAS, Tex.—A. C. Van Buskirk is now sales manager in charge of major appliances at North-Bell Hardware Co.

KAUFMANN'S, BALTIMORE

BALTIMORE—Oscar Levitt has left the sales staff of David Kaufmann's Sons, Gale air conditioning and Stewart-Warner radio distributor, to join Electrical Products, Inc., Emerson radio distributor. Ed. Boswell has joined the sales staff of Kaufmann's Washington branch.

STIX-BAER-FULLER, ST. LOUIS

ST. LOUIS—Glenn Allison, in charge of radio sales for Artophone Corp., Philco distributor here, has been transferred to Stix-Baer-Fuller department store. Al La Ra, Stix-Baer-Fuller radio and refrigeration manager, has joined Artophone Corp. as representative for the complete Philco line in the Missouri territory.

HOME MAKERS SERVICE, MADISON, WIS.

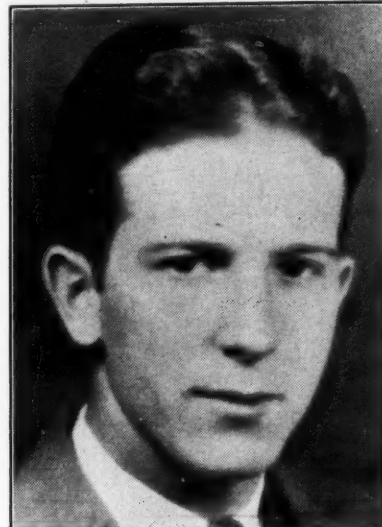
MADISON, Wis.—P. H. Blood, appliance salesman formerly associated with Wolff, Kubly & Hirsig, has joined the Home Makers Service, Norge home appliance firm.

New Fedders Plant Ready

OWOSSO, Mich.—New plant of Fedders Mfg. Co., equipped for the production of automotive radiators for automobiles, tractors, trucks, and gasoline or Diesel driven industrial units, has been completed here. The new plant, combined with the Buffalo factory, doubles the company's production capacity, officials say.

Appointments and Promotions

Freitas Named Peerless Dallas Factory Head



LEO J. FREITAS

DALLAS, Tex.—Leo J. Freitas has been placed in charge of the Dallas factory of Peerless of America, Inc. He has been associated with Fedders Mfg. Co. for seven years, as manager of branch offices in Dallas and Detroit, and during the past year was engaged in special engineering work.

Lang Takes Over G-E Apparatus Sales Post

SCHENECTADY, N. Y.—Chester H. Lang, manager of General Electric's advertising and sales promotional activities, has been named manager of apparatus sales and vice chairman of the company's apparatus sales committee. The apparatus or capital goods lines range from big turbines to tiny motors.

Peare Replaces Lang In G-E Publicity

SCHENECTADY, N. Y.—Robert S. Peare, president and general manager of the Maqua Co., a large printing and engraving concern affiliated with General Electric in Schenectady, has been named manager of the publicity department of General Electric Co. He succeeds Chester H. Lang.

In his new position, Mr. Peare will also serve as manager of broadcasting for the company. He joined G-E in 1922, and has been with the Maqua Co. since 1926.

Mittelhauser To Head N. Y. Kelvinator Ice Cream Sales

NEW YORK CITY—Henry M. Mittelhauser has been appointed manager of the New York territory of the ice cream division of Nash-Kelvinator Corp., to fill the vacancy left by Ed Kelley, who died early in April. Mr. Kelley had been associated with the company for the past 16 years.

Mr. Mittelhauser has been connected with the refrigeration industry for the past 14 years. New York territory headquarters of the ice cream division are in Long Island City.

Luebbe Named Assistant G-E General Counsel

BRIDGEPORT, Conn.—Ray H. Luebbe, counsel of General Electric's appliance and merchandise department, has been named assistant general counsel of the company. Mr. Luebbe will continue to make his headquarters in Bridgeport.

Meyer To Represent Cutler-Hammer In Houston

HOUSTON, Tex.—E. F. Meyer has been placed in charge of the Houston territory of Cutler-Hammer, Inc., manufacturer of electric switches and controls. He formerly had been a sales engineer for the company in the Milwaukee and St. Louis territories.

Cosgrove Elected To Crosley Directorate

CINCINNATI—R. C. Cosgrove, vice president and general manager of the manufacturing division of Crosley Corp., was elected a member of the board of directors of the corporation at the annual meeting of stockholders.

James W. Shouse, for the past three years vice president and general manager of the broadcasting division, also was elected to the board, membership of which has been increased from seven to nine.

Wagner To Direct Sales Of Westinghouse Cleaners

MANSFIELD, Ohio—A separate vacuum cleaner section has been created in the Westinghouse appliance department to coordinate the company's intensified activity on that appliance. George E. Wagner, former regional supervisor for Westinghouse laundry equipment, has been named manager.

Under Mr. Wagner's direction, a major part of the company's vacuum cleaner program will be concentrated on two new models—the "Pacemaker," a cylinder-type cleaner; and the "Floor Cruiser," a combination floor and hand unit.

Flaig Heads Crosley Cincinnati Branch

CINCINNATI—Guy Flaig, for 15 years connected with the electrical appliance business in Cincinnati both as distributor and manufacturer's representative, has been named manager of the Crosley Distributing Corp. of Cincinnati.

For the past two years, Mr. Flaig had been associated with Smith Distributing Co., appliance distributor in Louisville, Ky.

D. C. Prince To Manage G-E Commercial Engineering

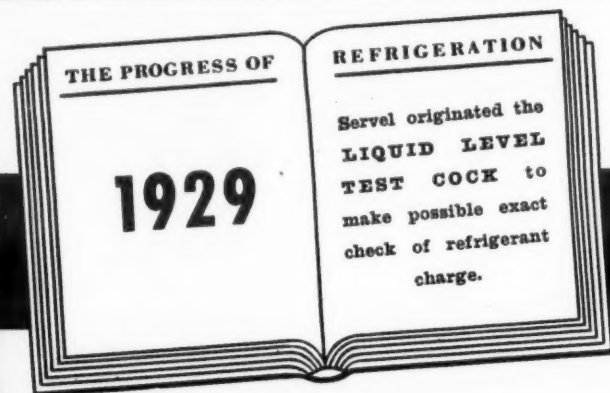
SCHENECTADY, N. Y.—David C. Prince of Philadelphia, since 1931 chief engineer of the switchgear department of the General Electric Co., has been named manager of the commercial engineering department, succeeding the late E. W. Allen. He has also been named a member of the company's advisory committee and the apparatus sales committee.

Mr. Prince is responsible for all commercial engineering service to apparatus customers and for services now provided by the contract service department.

Morgan Will Direct Crosley Market Analysis

CINCINNATI—Duncan J. Morgan has been placed in charge of market analysis for Crosley Corp. Work of the department will cover market research, sales analysis, and the analysis of industry trends.

He comes to Crosley from the American Gas Service Co. of Pittsburgh, where he was head of the market research department.



There Is No Substitute For Experience

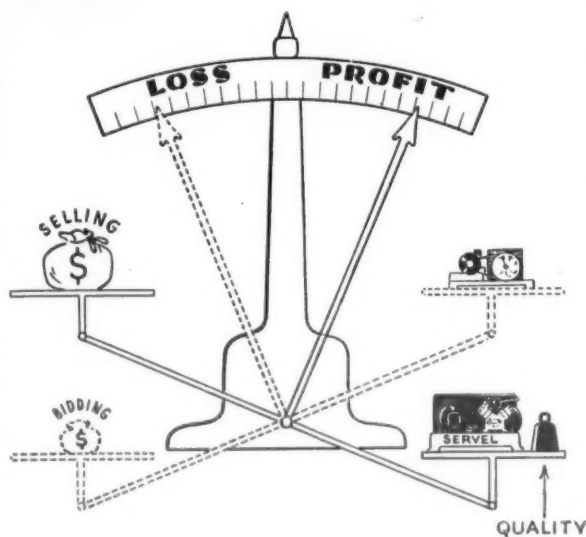
QUALITY SWINGS THE BALANCE!

Your Profit Demands Extra Weight on the Merchandise Side!

Buyers of refrigerating machines reach their decisions after balancing price against quality.

If you have to take too much out of your price to offset "lightweight" quality in the merchandise, your balance swings to the loss side.

Servel Commercial Refrigeration and Air Conditioning Machines give you the quality points you need to balance a fair price! These Servel quality points can be proved to prospects' satisfaction by demonstration—and by reference to thousands of satisfied users who are repeat buyers.



If you are interested in "heavy-weight" quality to protect your profits, write today for further information. A note on your letterhead to Servel, Inc., Electric Refrigeration & Air Conditioning Division, Evansville, Ind., will bring details.

SERVEL

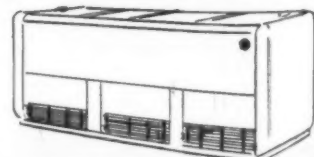
COMMERCIAL REFRIGERATION AND AIR CONDITIONING

PELCO BEVERAGE COOLERS



MAKE THEIR OWN FLOATING ICE

Great daily capacity—amazingly fast cooling—extremely inexpensive to operate. Deluxe models. Write for catalog of complete 1940 line.



PORTABLE ELEVATOR MFG. CO., BLOOMINGTON, ILL.

'The Show's the Thing' This Spring

Hartford Stages 'Cavalcade of Electricity' With
Dramatic Punch To Promote Appliances

HARTFORD, Conn.—"Cavalcade of Electricity" is the impressive title of the city-wide celebration which is being staged here in Hartford, "The Electric City," in honor of Thomas Alva Edison and the remarkable advancement of the electrical industry.

Sponsored by the electrical industry of Hartford, through the Hartford Electric League and the Hartford Electric Light Co., this program began April 7 and is scheduled to continue for the duration of the month. It was announced with a double-page spread in the Hartford Times on April 6, and has been consistently advertised and publicized in the local press since that time.

Purpose of the entire program is to set the stage for spring buying of electrical appliances by encouraging people to "think electrically." This promotion provides all dealers of electrical equipment with an opportunity to tie in their activities with one big, centralized cooperative effort.

During the period of the celebration, local appliance dealers are offering special values called "Cavalcade Specials." Their stores are decorated with large blue and gold banners carrying the "Cavalcade" theme and a picture of Thomas Edison. Many stores are holding "open house" evenings during this period.

One of the outstanding features of the festivities was a free variety show employing professional talent and combining drama, music, dancing, comedy, and a style revue. This show, which ran for three days at Bushnell Memorial Hall, starred

Gertrude Crippen, Hollywood model, and James Farrell, Broadway actor.

At the first performance of this show, tribute was paid to Montgomery Waddell, onetime associate of Edison, and John Edison Sloane, the famed inventor's grandson. Attendance at this performance was restricted to persons connected with the electrical industry, and their families.

The MGM biographical film, "Young Tom Edison," was released during the first week of the Cavalcade. Replicas of Edison's early inventions and other exhibits depicting the advancement in the art of electrical living were displayed in the lobby of the theater in which this film was shown.

An "Adequate Wiring" display was set up at the main office of Hartford Electric Light Co., with local manufacturers of wiring devices tying in with this phase of the activity.

General Electric's contribution to the Cavalcade is the "house that talks" and the "X-ray house." The talking house is an electrically equipped home furnished with a two-way public address system. Visitors who ask questions about the home's construction or facilities are answered by an unseen commentator, so that the house itself appears to be speaking. The X-ray house is a partially constructed home in which certain portions have been deliberately left unfinished so that inner details of construction can be seen.

In addition to these special attractions, a full complement of dealer displays, movies, cooking schools, and similar activities are scheduled.

Harrisburg and Madison Dealers Have Showroom Shows

HARRISBURG, Pa.—Local dealers joined in conducting a refrigeration show during the week of April 16, staged in stores and dealer showrooms throughout the city.

Special newspaper sections and other promotions were used to create public interest in the exposition.

Dealers participating in the special showing included the Bodwell Co., Burche Co., Caplan's, H. A. Gable Co., Hall's Electric Stores, Harrisburg Gas Co., Hoover Furniture Store, Kades, Levy & Gross, Miller's, Novinger Bros., Pomeroy's, Inc., Sears, Roebuck & Co., J. E. Shenk & Son, C. M. Sigler, Inc., Spangler's Music House, Troup Bros., J. H. Troup Music House, and Wolfe Engineering Corp.

N. C. Dealer Uses 24-Page Ad To Mark Anniversary

SANFORD, N. C.—A 24-page special section in the Sanford Herald was used by Brown Auto Supply Co., local appliance dealership, to celebrate its seventh anniversary in business here.

The section was a cooperative promotion, in which the various manufacturers represented by this dealer bought space. Frigidaire and Kelvinator were both represented with large advertisements. Brown Auto Supply has just taken on the Kelvinator line, and plans to open a new store in which to display these products.

F. L. Barber is owner of the store; M. C. Foster manages the appliance department. W. V. Lemon is appliance salesman, and J. P. Fore is service man.

Bendix Shows New Model At N. C. Distributor's Meeting

CHARLOTTE, N. C.—The new Bendix Utility model home laundry unit was introduced to dealers in the territory of Southern Bearings & Parts Co., Bendix, Norge, and Farnsworth products distributor, at a two-day meeting March 26 and 27 in the company's headquarters here.

Calvin D. Mitchell, Bendix southeastern sales manager, conducted the meeting. Assisting him were Clyde Remo, Bendix southern district service supervisor, and George O. Fulenwider, sales promotion manager of Southern Bearings & Parts.

MADISON, Wis.—Starting April 15, a city-wide automatic refrigeration and electrical appliance exposition was staged by local dealers in their respective showrooms. A special newspaper section was published to advertise the event. Participating firms included the following:

Every-Home Appliance Co., Burdick & Murray; Hefty Sales Corp.; Madison Gas & Electric Co.; Anderson Sales Co.; Montgomery Ward; Capitol Radio & Appliance Shop; and Wolff, Kubly & Hirsig.

Dept. Store Ad Interprets Kelvinator Price Drop

MILWAUKEE—Gimbel Bros. department store, in a full-page newspaper advertisement, credits Kelvinator with taking "three significant steps that have created an entirely new standard of refrigerator prices."

Copy captioned: "Something of Importance to You Has Happened in the Electric Refrigeration Industry—Gimbels Wants You to Know the Inside Story," declared that Kelvinator, "by eliminating uneconomical models and sizes, by cutting the cost of selling, and by taking full advantage of the economies of quantity production, has been able to establish an entirely new standard of value."

Closing copy stated: "Gimbels is pleased to cooperate with Kelvinator and to be identified with this courageous move in giving the public greater values at lower cost."

Dallas Two-Month Sales Fixed At 1,355 Units

DALLAS, Tex.—Total of 1,355 refrigerators were sold in Dallas territory in January and February. February sales totaled 742 units.

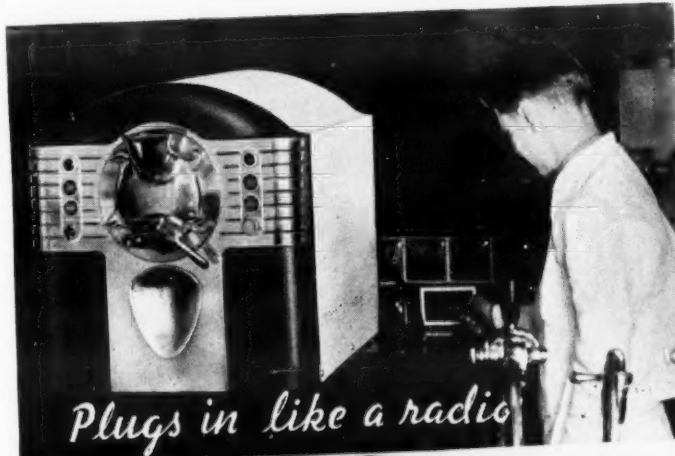
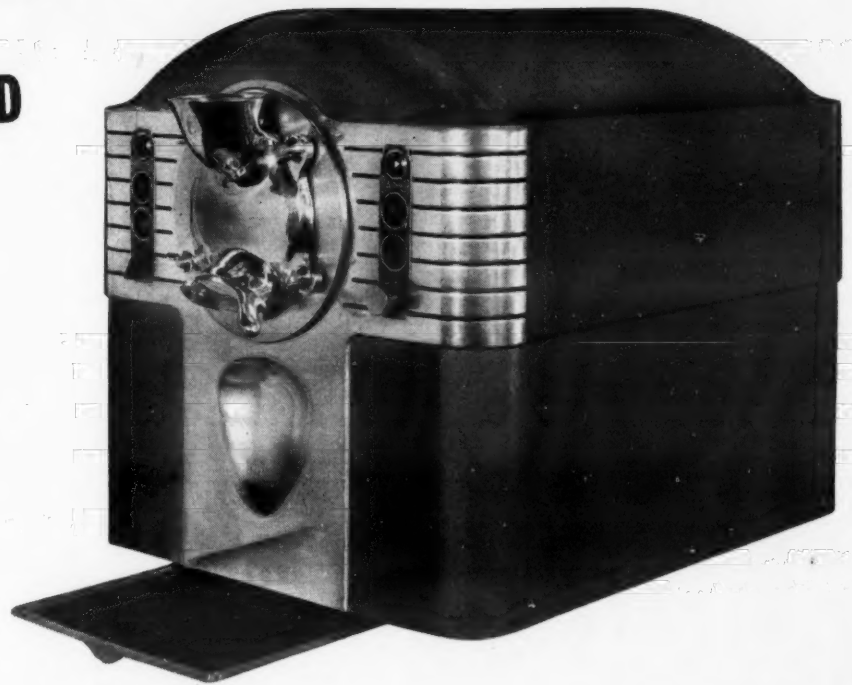
Following are complete appliance sales figures:

Appliance	February, 1940		2 Months, 1940	
	Unit	Dollar	Unit	Dollar
Refrigerators	742	\$133,560	1,355	\$243,900
Ranges	1	150	4	600
Water heaters
Radios	1,689	59,115	3,090	108,150
Washing machines	225	15,750	378	26,460
Vacuum cleaners	465	23,250	878	43,900
Dishwashers	1	150	1	150

NEW ONE-GALLON TUTHILL FREEZETTE

For Frosted Malted and Ice Cream

**SIMPLIFIED
CONTROL
•
REALLY
AUTOMATIC**



Plugs in like a radio



Simply pour in mix and flavor



and turn it on—that's all

At last—the equipment retailers have been waiting for! A compact, portable, really automatic freezer for Frosted Malted, ice cream, sherbets and ices. Nothing like it on the market. Sparkling beauty. Distinctive design. Simplified construction. Simplified refrigeration. Simplified control. Ample capacity for retailers' needs. Attractive price and big profit story make sales easy. Here is a wonderful money-maker for commercial refrigeration distributors and dealers.

DISTRIBUTORS!

A few territories are still open on an exclusive franchise basis. Full details will be sent promptly on request.

WIRE OR WRITE TODAY

**FREEZER SALES DIVISION
TUTHILL PUMP COMPANY
939 EAST 95TH STREET • CHICAGO, ILL.**

TUTHILL Automatic FREEZETTE

Range Sales Head



E. J. KANKER
Norge range sales manager.

Norge Plant Chief



HERBERT MORLEY
Detroit manufacturing chief.

Bargain Package Litigation Needs Clarification

NEW YORK CITY—The question of "who's-fighting-who" in the battle instituted by the League of Metropolitan Appliance Dealers against the Consolidated Edison's "bargain package" (vacuum cleaner, lamp, and ironer) sales campaign became somewhat complicated last week as one of the groups in the league denied that it had sanctioned the legal action instituted against the campaign.

The Electric Appliance Merchants

Association of Queens, one of the group that comprise the League of Metropolitan Appliance Dealers, declared that it had at no time authorized the league to name the Queens group as plaintiff in any suit or litigation.

In reply, Edward Lowe, chairman of the league, stated that the action had been sanctioned by representatives of the Queens group, and that the league would go right ahead with the lawsuit.

Philadelphia Monthly Refrigerator Sales 1937-1939

Month	1939 Units Sold	1938 Units Sold	1937 Units Sold	1939% Inc. Or Decrease Over 1938	1939 Retail Value	1938 Retail Value	1939% Inc. Or Decrease Over 1938	1939 Average Price	1938 Average Price
January	3,366	3,123	3,135	+ 8%	\$ 592,578	\$ 564,097	+ 5%	\$177	\$180
February	4,797	3,797	6,119	+ 26%	871,598	664,574	+ 31%	181	176
March	6,517	4,826	9,051	+ 34%	1,178,035	848,012	+ 38%	180	175
April	4,828	5,861	9,452	- 18%	837,398	1,037,313	- 20%	173	176
May	9,206	4,812	9,743	+ 91%	1,556,314	832,319	+ 88%	169	173
June	9,374	3,623	9,103	+158%	1,592,453	627,475	+153%	169	173
July	5,285	3,237	7,435	+ 63%	893,294	575,856	+ 55%	169	178
August	4,305	3,936	4,725	+ 9%	716,795	693,344	+ 3%	166	177
September	3,498	2,617	3,762	+ 33%	581,864	457,278	+ 27%	167	175
October	2,452	1,697	2,456	+ 44%	402,872	295,848	+ 36%	164	173
November	2,058	1,494	3,323	+ 38%	335,627	265,480	+ 26%	163	178
December	1,852	1,368	3,240	+ 35%	322,330	249,638	+ 28%	174	183
Totals	57,538	40,391	71,544	+ 42%	\$9,881,158	\$7,111,234	+ 38%	\$172	\$176

Sales by Philadelphia Electric Co.

Totals	6,698	3,223	5,056	+108%	\$1,441,775	\$ 630,672	+129%	\$215	\$195
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Note: Utility sales approximate 11.6% of total sales

Report covers sales in Philadelphia, Bucks, Montgomery, Delaware, and Chester counties.

Report includes sales of the following makes: Coldspot, Crosley, Frigidaire, Gibson, General Electric, Hotpoint, Kelvinator, Leonard, Norge, Stewart-Warner, and Westinghouse.

Chain Store Probe Seems Likely To Continue

(Concluded from Page 1, Column 5) it was identical in quality with the manufacturer's own brand, and the customer was able to save \$2 by reason of mass purchasing power of the chain—and the absence of national advertising.

"What chance has the independent

in the face of such competition?" Mr. Peterson asked the committee.

"And may I direct your attention to another advertisement issued by Montgomery Ward & Co., for washing machines in which the statement was made, and I quote: 'Why waste money paying \$89.95 for a washer when you can actually buy a finer washer at Montgomery-Ward and save at least \$32?'"

Asked by the committee what he sought to obtain by the chain store tax bill, Mr. Peterson declared his individual effort was directed toward keeping the multiple store systems from interstate operations.

PATMAN BILL DOOMED?

Although the Patman bill is conceded to be a forlorn hope this session, even before 111 opposition witnesses proclaimed the chains to be 100% pure, the multiple store interests have found new cause for anxiety in a strong probability that Congress may probe their operations further with a view to getting at the real truth of the situation.

"If we do not get it here," declared Representative John W. McCormack, of Massachusetts, chairman of the sub-committee, "I am going to try to obtain it myself—as to the complete situation not only as to chains, but the cooperatives and the wholesaler-retailer multiple chain systems in this country."

Hearings on the bill are expected to continue until the first week in May, the final phase to be rebuttal testimony by proponents of the bill after the 111 chain store witnesses have been paraded before the committee.

57,538 Units Sold In Philadelphia Last Year

(Concluded from Page 1, Column 2) year, however, fell 18% below 1938, with sales being 4,828 units.

May and July were second and fourth high sales months in 1939, with totals of 9,206 and 5,285 units, respectively. Sales in the three-month period (May, June, July) amounted to 23,865 units. March sales of 6,517 units put that month third to May and June in the year's totals.

23 Chicago Restaurants Cooled In First Quarter

(Concluded from Page 1, Column 1) this addition, installations for the month amounted to 57 units.

Contracts for central-plant cooling systems during the first three months of the year were divided as follows:

Restaurants	23
General Offices	15
Clothing Stores	7
Industrial Plants	4
Fur Stores	4
Funeral Parlors	3
Private Offices	2
Theaters	2
Department Store	1
Drug Store	1
Food Store	1
Candy Store	1
Florist Shop	1
Hospital	1
Doctor's Office	1
Barber Shop	1
Amusement Parlor	1
Total	69

DETROIT DURA-FRAME VALVES

now available
FROM YOUR WHOLESALER



NO. 897-1 TON
ADJUSTABLE

Now you can get Detroit Dura-frame Valves from your wholesaler.

Dura-frame Expansion Valves were one of the outstanding developments displayed at the Chicago Show. Some of their more important features are:

Thermostatic Power Elements are Gas Charged—this provides more sensitive operation, better balancing and eliminates motor overload.

Single Diaphragm Construction—smaller, more compact valves—easy to handle and install.

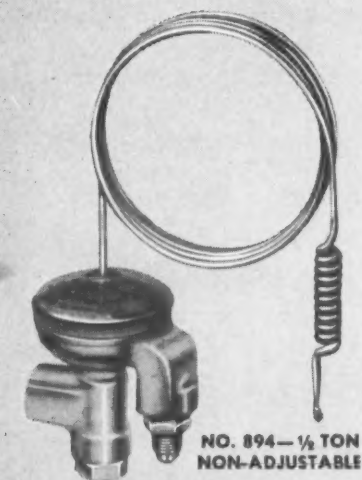
Silver-brazed Power Element Joints—prevent refrigerant loss in event of possible diaphragm fracture.

All Diaphragms Tested for Flexibility—to insure uniform capacities and smooth operation.

Improved Inlet Connections—simplify installation on old or new jobs.

Special Cast Brass Alloy Bodies—costlier than others to manufacture but retained in Detroit Dura-frame Valves because of their dependability record in millions of earlier Detroit Valves.

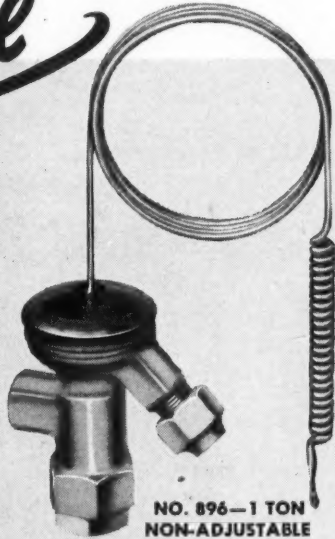
Deluballoy Needles and Seats—wear and corrosion resistant metal, the superiority of which has been proved during more than four years in Detroit Expansion Valves.



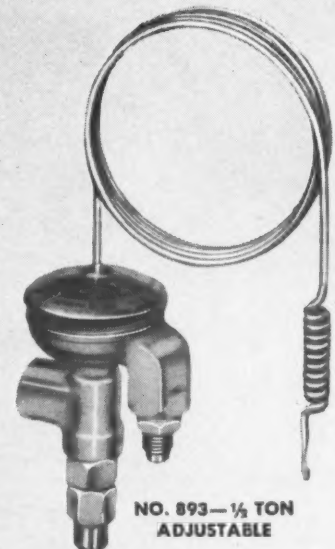
NO. 894-1/2 TON
NON-ADJUSTABLE



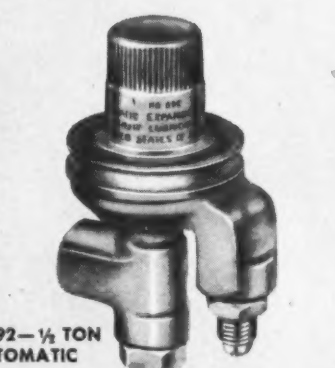
NO. 895-1 TON
AUTOMATIC



NO. 896-1 TON
NON-ADJUSTABLE



NO. 893-1/2 TON
ADJUSTABLE



NO. 892-1/2 TON
AUTOMATIC



DETROIT LUBRICATOR COMPANY

General Offices: DETROIT, MICHIGAN

Canadian Representatives—RAILWAY AND ENGINEERING SPECIALTIES LIMITED, Montreal, Toronto, Winnipeg

M&E COMPRESSORS

Help Beer Distributors

— by Duplicating
Brewery
Conditions

Insulated storage rooms, maintained at the correct draft storage temperature, enable this modern beer distributor to store a large number of barrels indefinitely for spot delivery to users.

M&E Heavy Duty Compressors are meeting this new departure in beer distributing with characteristic economy and efficiency.

• We shall be glad to give you the benefit of our experiences in this growing field.

THERE IS A COMPLETE LINE OF M&E COMPRESSORS FROM 1/5 to 25 HP

MERCHANT & EVANS COMPANY
PHILADELPHIA, PA. • PLANT AT LANCASTER, PA.

Robinson Gold Mine Adds 2,000-Ton Cooling System

SYRACUSE, N. Y.—Rivalling the adjoining Turf Shaft installation, an air conditioning system extending operations in the Chris Shaft of the Robinson Deep Gold mine at Johannesburg, South Africa, below the 8,500 foot levels, was announced today by James A. Bentley, vice president of the Carrier Corp.

Returning from Africa, Mr. Bentley disclosed a contract had been awarded to Carrier Engineering South Africa, Ltd. which will include two Carrier centrifugal refrigeration machines. This equipment has a cooling capacity equal to the melting of 4,000,000 lbs. of ice daily. The cooling system equipment, installed on the surface, is designed to supply approximately 400,000 cubic feet of cool air per minute, Mr. Bentley said.

Wherever gold has been found, the mines are working night and day. The Rand district in the Union of South Africa is the greatest gold-producing area in the world. Several of the mines there have reached the tremendous depth of 8,500 feet below the shaft collar. At such depths, the heat and humidity are so extremely oppressive as to make it uneconomical to continue without the aid of air conditioning.

In 1935, what was then the world's largest air conditioning system was installed for the Turf Shaft, Robinson Deep, Ltd., of the New Consolidated Goldfields group. Working conditions at the deeper levels have become satisfactory, resulting in greatly increased productive capacity, and benefitting the health of the miners.

The present air conditioning system has reduced the former temperatures 27° near the surface and 9° at the bottom of the mine. This is accomplished by cooling the air to 33° at the surface and distributing it through the mine workings.

Dr. Willis H. Carrier, chairman of Carrier Corp. planned the new installation. He was recently requested by Carrier Engineering South Africa, Ltd. to again visit the Rand and study current mine air conditioning problems. After Mr. Carrier's analysis, Mr. Bentley flew to South Africa.

Kramer Announces New Unit Conditioner Line

TRENTON, N. J.—A new line of complete cabinet type air conditioning units for either floor or ceiling mounting, available in capacities from 2 tons to 30 tons in cooling and from 65,000 to 1,280,000 B.t.u. per hour in heating, has been announced by Kramer Trenton Co. here.

Coils furnished on all units are of the "Turbo-Fin" type, and are of all-copper construction. Fins are bonded to the tubes by metallic fusion, which is claimed to result in maximum and permanent coil effectiveness. Coils are manifolded for the particular cooling or heating fluid specified, and are tested under 300 lbs. pressure.

Cabinet is of heavy gauge steel, and is said to provide accessibility to all working parts. Larger units are made up of three or more sections, including fan section, heating coil section, cooling coil section, and base. This arrangement, it is claimed, makes for portability through door openings. Cabinet is lined with sound deadening and heat insulating material. Standard finish is battleship gray, with other colors available on request.

Humidifiers for winter operation can be supplied at extra cost. Fans are of the centrifugal type, and operate at low speed for more silence and efficiency, it is claimed. Self-aligned, rubber mounted bearings are used.

Motors are of standard manufacture and are rubber mounted outside the unit on an adjustable base. A "V" belt drive is used.

Filters are of the standard fiber-glass type, sliding in slots to make their removal easier. They are of the replaceable type.

Sun Load Balanced By 10-Zone Control

NORTHVILLE, Conn. — Year-around air conditioning controlled by 10 individual thermostats, each handling a separate zone, has been installed in the new residence of F. Julius Fohs here. Service rooms and bathrooms are heated with vapor steam controlled by a thermostat in the service section of the house.

Summer cooling and winter heating is provided by a Carrier Weather-maker powered by a 5-ton refrigeration machine and a conventional boiler. Forced air circulation provides a constant air supply to the main portions of the house.

One of the important reasons for the 10-zone system was to compensate for sun effect. Zone control is based not only upon the particular functions of the various rooms and their hours of occupancy, but also on their exposure to the sun and winds.

The dining room, which may be

used only five hours daily, has the thermostat set to deliver cool or warm air only during the actual occupancy. At other times the air supply is cut off. Bedrooms receive full air supply during the evening previous to use, but are heated only moderately during the day.

Each zone is controlled by wall thermostat operating power motorized dampers in the ducts, closing and opening them automatically in accordance with the pointer settings. Dampers are not louvered, but are single blades set in ball bearings. This feature is said to eliminate squeaks.

Outdoor air supplied to the conditioning system is controlled also by an air stream thermostat. This control moves the fresh air damper to maintain the desired mixture of fresh air, depending on outside temperature.

The tenth thermostat is in the servant's quarters to control direct radiation in service and bathrooms.

The architect is William E. Shepherd, New York City. David F. Atkins is engineer. Cost of the residence will run around \$80,000.

Hotel's Cooling System Goes 'Under Hammer'

CHICAGO—In what is believed to be the first sale of an air conditioning system at public auction, equipment of the Great Northern hotel, which is being demolished to make way for the new Chicago subway, recently brought \$1,700 under the auctioneer's hammer.

The equipment, installed in 1935 by Carrier engineers, was purchased by the Standard Club of Chicago, exclusive Jewish organization. The purchase included refrigeration machines, air conditioning units, outlets, and controls.

Film Conditioning

LOS ANGELES—Frigidaire has been awarded the air conditioning contract on the new film exchange building to be constructed at 2025 S. Vermont Ave. for the Warner Brothers Pictures.

Rose Lists Conditioning Needs of 'Litho' Plants

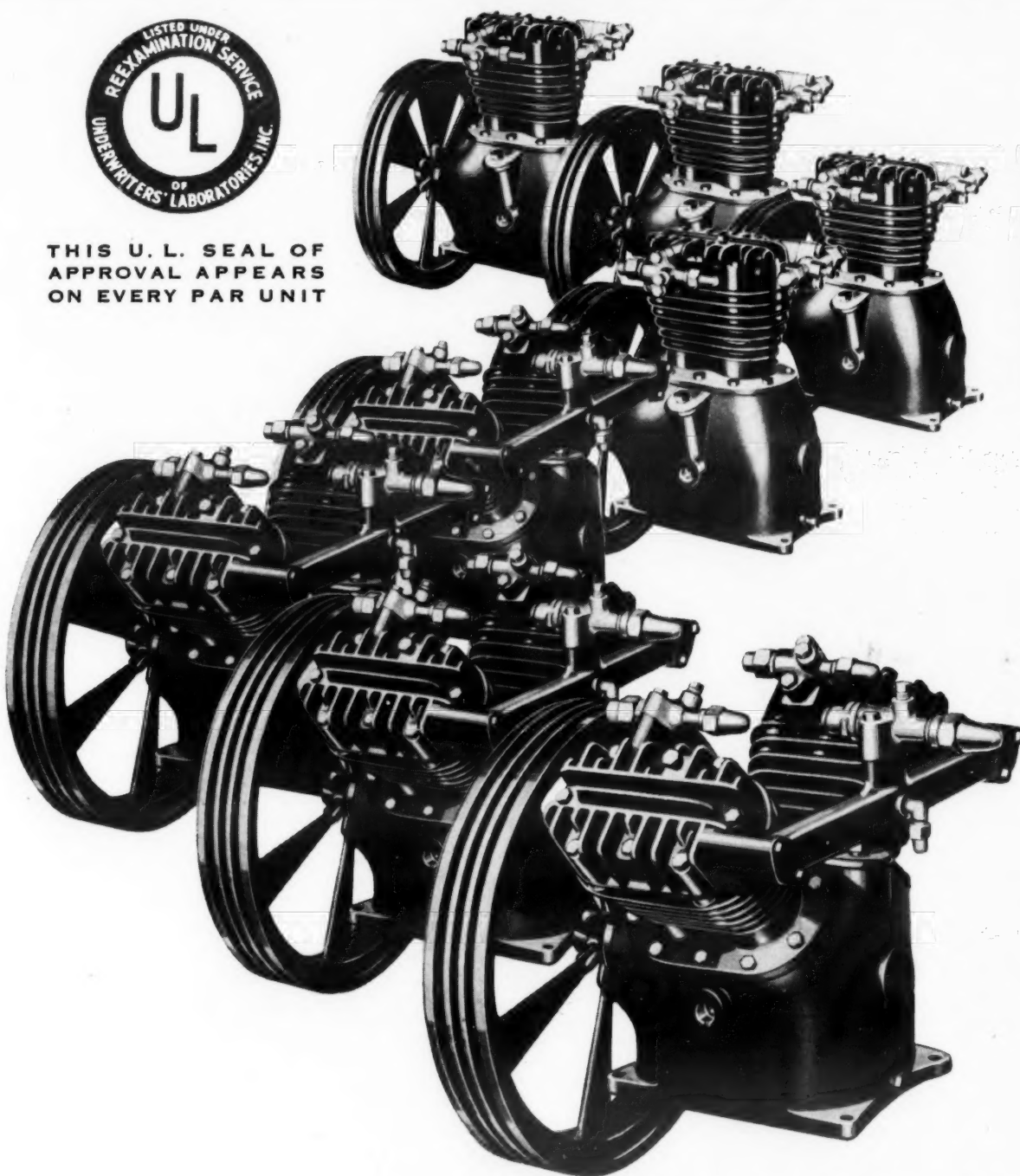
NEW YORK CITY—Problems of the modern lithographing plant and how they have been controlled by air conditioning were outlined by Paul R. Rose, Carrier Corp. engineer, at a recent meeting of the New York Litho Club.

"There are three places in the modern lithographing plant where control of atmospheric conditions is important," Mr. Rose said, "the plate-making department, the press room, and the stock room."

"Control of both temperature and humidity is called for in the plate-making department. Furthermore, there is a need for the elimination of the dirt hazard. In the press room humidity control is more important than temperature, but low humidities desired by offset printers must be accompanied by controlled temperature of air. The stock storage room should be kept at the same conditions as the press room."



THIS U. L. SEAL OF APPROVAL APPEARS ON EVERY PAR UNIT



PAR

HAS THE RIGHT SIZE!

FOR every job of refrigeration there is one correct size of compressor — one correct size that will insure maximum efficiency. Don't botch up an installation with a compressor that is too big or too little... it's not necessary when you use a PAR. 2 and 4 cylinder compressors... 8 sizes, 1/5 H.P. to 10 H.P.—the correct size to properly fit any particular application. Buy PAR!

★ ★ A PAR UNIT FOR EVERY JOB ★ ★
SEE YOUR JOBBER

ALABAMA
BIRMINGHAM—REFRIGERATION SUPPLIES DISTRIBUTOR
MONTGOMERY—TEAGUE HARDWARE CO.

ARIZONA
PHOENIX—J. CARL WHITE CO.

CALIFORNIA
LONG BEACH—REFRIGERATION SUPPLIES DISTRIBUTORS
LOS ANGELES—FRANK GILLET COMPANY
LOS ANGELES—REFRIGERATION SUPPLIES DISTRIBUTORS

OAKLAND—CALIFORNIA REFRIGERATOR CO.
SAN FRANCISCO—CALIFORNIA REFRIGERATOR COMPANY

COLORADO
DENVER—MC COMBS REFRIGERATION SUPPLY CO.
DISTRICT OF COLUMBIA
WASHINGTON—MELCHIOR, ARMSTRONG, DESSAU COMPANY

FLORIDA
JACKSONVILLE—BOWEN REFRIGERATION SUPPLIES, INC.
TAMPA—BOWEN REFRIGERATION SUPPLIES, INC.
WEST PALM BEACH—MOTOR PARTS & EQUIPMENT COMPANY, INC.

GEORGIA
ATLANTA—BOWEN REFRIGERATION SUPPLIES, INC.
MACON—LOWE ELECTRIC CO.



Catalog of Complete Line Sent on Request

ILLINOIS
CHICAGO—H. W. BLYTHE COMPANY
CHICAGO—AUTOMATIC HEATING & COOLING SUPPLY CO.
PEORIA—R. E. THOMPSON COMPANY

INDIANA
INDIANAPOLIS—F. H. LANGSENKAMP CO.
SOUTH BEND—F. H. LANGSENKAMP CO.

IOWA
CEDAR RAPIDS—DENNIS REFRIGERATION SUPPLY
DAYTON—REPUBLIC ELECTRIC COMPANY
DES MOINES—DENNIS REFRIGERATION SUPPLY
SIoux CITY—DENNIS REFRIGERATION SUPPLY
WATERLOO—WINTERBOTTOM SUPPLY CO.

KANSAS
WICHITA—HOWARD SUPPLY CO.

KENTUCKY
LEXINGTON—UNITED SERVICE CO., INC.
LOUISVILLE—S. W. H. SUPPLY CO., INC.

MARYLAND
BALTIMORE—MELCHIOR, ARMSTRONG, DESSAU COMPANY

MASSACHUSETTS
BOSTON—MELCHIOR, ARMSTRONG, DESSAU CO.
SPRINGFIELD—MELCHIOR, ARMSTRONG, DESSAU COMPANY

MICHIGAN
FLINT—LIFSEY DISTRIBUTING CO.
GRAND RAPIDS—S. F. HARRIS & SON

MINNESOTA
MINNEAPOLIS—REFRIGERATION & INDUSTRIAL SUPPLY CO., INC.

MISSOURI
KANSAS CITY—FORSLUND PUMP & MACHINERY COMPANY
ST. LOUIS—BRASS & COPPER SALES CO.

NEBRASKA
LINCOLN—WICHAM SUPPLY COMPANY
OMAHA—INTERSTATE MACHINERY & SUPPLY CO.

NEW JERSEY
NEWARK—MELCHIOR, ARMSTRONG, DESSAU CO.
RIDGEFIELD—MELCHIOR, ARMSTRONG, DESSAU COMPANY

NEW YORK
ALBANY—MELCHIOR, ARMSTRONG, DESSAU COMPANY
BROOKLYN—MELCHIOR, ARMSTRONG, DESSAU COMPANY
BRONX—MELCHIOR, ARMSTRONG, DESSAU CO.
BUFFALO—MELCHIOR, ARMSTRONG, DESSAU CO.
ROCHESTER—MELCHIOR, ARMSTRONG, DESSAU COMPANY

NEW YORK CITY—MELCHIOR, ARMSTRONG, DESSAU COMPANY
NORTH CAROLINA
CHARLOTTE—HENRY V. DICK & CO.
GREENSBORO—HASCO, INC.
RALEIGH—HENRY V. DICK & CO.

OHIO
AKRON—PERCY G. HANSEN
CINCINNATI—THE MERKEL BROTHERS CO.
CLEVELAND—DEBES & COMPANY
COLUMBUS—REFRIGERATION ELECTRIC SUPPLY CO.

DAYTON—THE W. H. KIEFABER COMPANY
TOLEDO—HEAT & POWER ENGINEERING CO.

OKLAHOMA
OKLAHOMA CITY—MIDDEKE SUPPLY CO.
TULSA—MACHINE TOOL & SUPPLY CO.

OREGON
PORTLAND—REFRIGERATION SUPPLY, INC.

PENNSYLVANIA
HARRISBURG—MELCHIOR, ARMSTRONG, DESSAU COMPANY
PHILADELPHIA—MELCHIOR, ARMSTRONG, DESSAU COMPANY
PITTSBURGH—MELCHIOR, ARMSTRONG, DESSAU COMPANY

TEXAS
CORPUS CHRISTI—HOLSWORTH EQUIPMENT CO.
DALLAS—THE ELECTROMOTIVE CORPORATION
FORT WORTH—MC KINLEY REFRIGERATION SUPPLY COMPANY, INC.
HOUSTON—D. C. LINGO COMPANY
LUBBOCK—R. R. PARTS AND SUPPLIES CO.
WICHITA FALLS—UNITED ELECTRIC SERVICE CO.

VIRGINIA
NORFOLK—NOLAN COMPANY, INC.
RICHMOND—A. R. TILLER, INC.

WASHINGTON
SEATTLE—REFRIGERATION SUPPLY, INC.
SPOKANE—REFRIGERATION PARTS SUPPLY CO.

WEST VIRGINIA
CHARLESTON—AIR CONDITIONING & REFRIGERATION SUPPLIES, INC.

WISCONSIN
MILWAUKEE—REFRIGERATION SPECIALTY CO.

CANADA
MONTREAL, QUEBEC—RAILWAY & ENGINEERING SPECIALTIES, LTD.
TORONTO, ONTARIO—RAILWAY & ENGINEERING SPECIALTIES, LTD.
WINNIPEG, MANITOBA—RAILWAY & ENGINEERING SPECIALTIES, LTD.
VANCOUVER, BRITISH COLUMBIA—FLECK BROTHERS, LTD.

EXPORT DEPARTMENT
MELCHIOR, ARMSTRONG, DESSAU COMPANY, RIDGEFIELD, N. J.

MODERN EQUIPMENT CORPORATION

DEFIANCE, OHIO

Ice Box Trade-In Case Returned For Review

ALBANY, N. Y.—The request of Consolidated Edison Co. of New York to dismiss proceedings brought against it by City Ice & Fuel Co., New York City ice manufacturer, and Paul Kurutz, a utility customer, with reference to old icebox trade-ins in last year's electric refrigerator drive, has been denied by Justice William H. Murray of the state supreme court.

Justice Murray has transferred the entire proceedings to the appellate division of the court for review. The utility is allowed 20 days in which to file answer to the petition.

The case came before Justice Murray by petition of the plaintiffs to review a decision of the state public service commission, after the latter had upheld Consolidated Edison in its belief that it had no jurisdiction over the proceedings. The ice company and Mr. Kurutz contend that the \$9.50 trade-in allowance on old iceboxes was in effect a rebate on electric bills to customers of the utility who purchased new refrigerators during the drive. Non-purchasers were denied this rebate, it is claimed.

In turning the case over to the appellate division for review, Justice Murray declared that he "vigorously disagreed" with the public service commission's view that it had no jurisdiction over the matter. The supervisory power of the commission must be broad, he stated, lest utility companies prejudice public interest, in view of their "inherent nature and resulting power of monopoly."

32,998 Ranges Shipped In Feb; 22% Gain

NEW YORK CITY—Showing a gain of 22% for the month, shipments of electric ranges by members of National Electrical Manufacturers Association to distributors and dealers in the United States totaled 32,998 units during February, as compared with 27,058 in the same month of 1939.

For the first two months of this year, electric range sales reported by Nema manufacturers amounted to 69,393, as compared with 55,132 in the same period of last year, an increase of about 26%. Reports from 18 manufacturers are included in the two-months' totals.

44 States Represented In MKB Spring Promotions

NEW YORK CITY—Forty-four states and the District of Columbia already are represented by participants in one or more of Modern Kitchen Bureau's 1940 spring promotional programs on electric ranges, refrigerators, and water heaters, reports M. L. Martin, MKB manager.

The "Electric Range Revue" is being carried on by utility companies or dealers in 42 states and the District of Columbia; the "Donald Duck" campaign on water heaters and the "Twice the Value at Half the Cost" drive on refrigerators will be in operation in 37 states. Campaign enrollment is the highest in the Bureau's history.

Century Electric Co. Moves Chicago District Office

CHICAGO—District office of Century Electric Co. here has been moved to Room 412, Igou building, 600 West Van Buren St. H. A. Porter is regional sales manager, and H. L. Madsen district sales manager.

Maryland Court Bars Below-Cost Sales Act

ANNAPOLIS, Md.—Declaring that the measure "unreasonably and arbitrarily interferes with private business," the Maryland Court of Appeals declared unconstitutional a 1939 state law designed to prevent below-cost sales at wholesale or retail, in a decision rendered April 5.

The statute, known as the "Sales Below Cost Act," established a cost basis for retailers of purchase or replacement price, plus freight and cartage, in addition to a mark-up of 6% for retailers, and 2% for wholesalers.

Decision of the Court of Appeals upheld a ruling last December by Chief Judge Samuel Dennis of the Baltimore Supreme Court, in a case involving two wholesale tobacco dealers.

The 1939 below-cost sales act had repealed certain sections of a similar 1937 law which it replaced, and the decision automatically reinstated those sections, which, it was pointed out, did not include the 6% mark-up stipulation.

Invalidation of the act in question has no effect on the Maryland Fair Trade Act, passed in 1937, authorizing price contracts between manufacturers and retailers. This latter act was upheld by the Appeals Court in a test case last June.

EARNINGS

Westinghouse

EAST PITTSBURGH, Pa.—Purchases of Westinghouse household equipment, including refrigerators, electric ranges, and small appliances, are up about 12% for the first three months of 1940 as compared with the same period of last year, President George H. Bucher told stockholders at the annual meeting of the company.

Orders booked by Westinghouse (all divisions) during the first quarter of 1940 totaled \$65,250,000, as compared with \$50,121,000 for the same months of 1939, an increase of about 30%. Unfilled orders, as of March 31, amounted to \$83,000,000, a peak figure in the company's history.

Westinghouse employees now number 51,000, more than at any time since the fall of 1937.

General Electric

SCHENECTADY, N. Y.—Sales billed by General Electric Co. (all divisions) during the first quarter of 1940 amounted to \$85,949,194, compared with \$68,537,269 during the same quarter last year, an increase of 25%.

Profit available for dividends amounted to \$11,951,450 or 41 cents a share, for the first quarter this year, compared with \$7,373,431 or 26 cents a share, for the first quarter last year.

Orders received during the first quarter of 1940 amounted to \$97,490,047, compared with \$86,882,953 for the same quarter of 1939, an increase of 12%.

Stewart-Warner

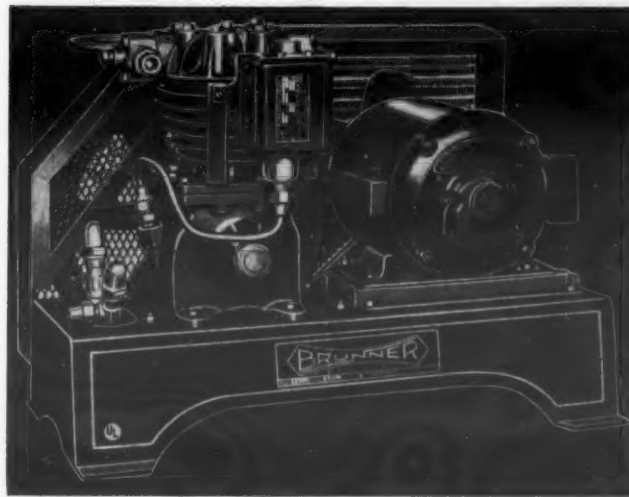
CHICAGO—Stewart-Warner Corp. and subsidiaries has reported net profit of \$328,202 for the first three months of 1940, equivalent to earnings of 26 cents per share, after provision for federal income tax and Canadian exchange. Net profit for the corresponding period last year was \$146,275, equal to earnings of 12 cents a share.



Ice cream products with that appealing "freezer-fresh" flavor—Thanks To Brunner

Uniformity of temperature... dependability of performance... smoothness and economy of operation—these are mighty vital factors in the successful merchandising of ice cream products. So it is only natural that the ice cream industry should turn to Brunner! In Brunner Condensing Units are embodied the engineering foresight and structural stamina that comes from long association with the needs of commercial refrigeration. In design, metallurgy, precision of manufacture, today's Brunner Condensing Units represent the fruit of years of research and practical experience. Extra-heavy structural members... perfect alignment of rotating parts, all precision machined, all dynamically balanced... bronze bearings throughout... silent eccentric drive... large fin surface... oversize condenser—these are a few of the outstanding reasons for Brunner's superiority in commercial service. So whether it's the protection of ice cream products or one of the many refrigeration applications—look to Brunner for reliable performance. The Brunner line in-

cludes air and water cooled units from 1/4 H. P. to 25 H. P. And every Brunner has Underwriters' Laboratories approval and carries the U. L. Seal. Catalog on request. Brunner Manufacturing Company, Utica, N. Y., U. S. A.



BRUNNER

FOR YEARS THE SYMBOL OF QUALITY

High Purity
and
Dryness

Prompt
Shipments
Nationwide
Distribution

Every
Cylinder
Tested



20 Year
Performance
Record

Helpful
Technical
Assistance



E. I. DU PONT DE NEMOURS & CO. (INC.)
The R. & H. Chemicals Dept.
Wilmington, Delaware
District Sales Offices: Baltimore, Boston, Charlotte,
Chicago, Cleveland, Kansas City, Newark,
New York, Philadelphia, Pittsburgh, San Francisco

Madison Jobber Gives 'Tailored' Service; Doubles His Business Every Year

By Henry Knowlton

MILWAUKEE—Doubling the prior year business volume each year since 1936 when the firm was started at Madison, Wis., is the phenomenal record of the G. A. Larson Co., refrigeration supply jobber here. Headquarters of the company was moved to Milwaukee early this year and branches are now operated in Madison, Oshkosh, and Rockford, Ill.

From 1920 until 1936, G. A. Larson learned the refrigeration business by operating a refrigeration contracting and service organization at Madison. This experience taught him what refrigeration service engineers, contracting organizations, dealers, and distributors want from a supply jobber, and has, in part, been responsible for the firm's success.

If you call telephone number 3844 (the exchanges are different) in any of the four cities served by the Larson company, you will get the local office. In this way Mr. Larson has made it easy for his customers to remember how to get in touch with his company. Should you call the main store at Milwaukee any time from seven o'clock Monday morning, until late Saturday night, you would undoubtedly find Mr. Larson "on the job."

At the present time the headquarters store in Milwaukee is being entirely revamped—new shel-

ing—new offices—new stock. But even while this remodeling is in progress, Mr. Larson is behind the counter, talking with customers who come in from all over this vicinity—calling them by their first names—and helping them with their problems. At other times he is answering the telephone which rings—and rings—and rings.

Every man in the Larson organization specializes in the application of refrigeration equipment to the customer's problem. As an example of how this "engineering service" brings business, Mr. Larson cited the problem encountered by the Chill-Quick Corp. of this city. This concern builds a beer cooling mechanism which is inserted in the keg carrying refrigerant through tubes inserted one inside the other.

HOW TO KEEP CUSTOMERS

Mr. Larson reports that by showing engineers for the company how to install a surge tank and constant pressure valves in connection with the mechanism, the problem of freeze-ups was eliminated and the beer could be cooled to the proper temperature at all times. It is this kind of service, Mr. Larson declares, which makes and keeps good customers.

Harold Zentner, salesman for the Larson company, take an active

interest in the air conditioning industry and serves as secretary of the Wisconsin Refrigeration & Air Conditioning Contractors Association. This organization is now working out code problems which confront the air conditioning trade, and are negotiating labor contracts with the local steamfitters unions.

The steamfitters, Mr. Zentner says, want all air conditioning distributors to operate under a license arrangement—the license to be secured by examination. This is agreeable to members of the association, Mr. Zentner reports, if the steamfitters will permit members of their organization to take a similar examination before they are permitted to install refrigerant piping, particularly in the larger sizes. At the present time this discussion has reached a stalemate—and no action has been taken either way.

Sales of refrigeration equipment to the air conditioning industry now account for approximately 15% of the business of the Larson company, Mr. Zentner says, and the percentage is growing rapidly each year.

No compressors (except replacement units for household refrigerators) are sold by the Larson company. The firm gets a great deal of business from franchised distributors of national concerns and Mr. Larson does not believe in going into competition with these accounts. "Why should we compete with many of our best customers," Mr. Larson says, "when the business they give us has a great deal to do with our success."

A large stock of refrigeration and air conditioning supplies is carried in the Milwaukee store and parts

Meet G. A. Larson and Company!



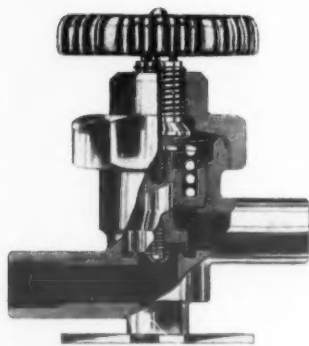
(Above, left to right) A. L. Wilson of Racine, Wis., E. F. King, William L. Rodgers of Dayton Rubber Co., Ray Sweeney, Gertrude Hundt, Mr. Larson himself, Harold Zentner, and Vertrude Stoner. All but Mr. Wilson and Mr. Rodgers are members of the Larson organization. (Below, left) Miss Stoner and Miss Hundt show Mr. Larson the latest copy of the News. (Below, right) Mr. Rodgers tells Jobber Larson that he carries the biggest stock of Dayton belts in Wisconsin.



TAKE
"CARE"
to choose

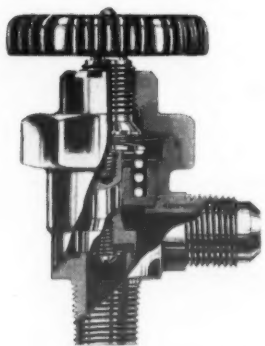
KEROTEST

THE ORIGINAL AND GENUINE
Diaphragm Packless
VALVES



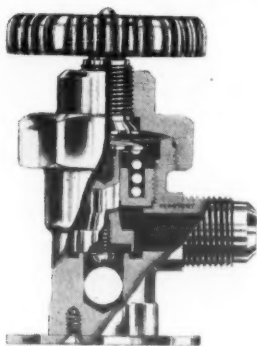
LINE VALVES

In 13 sizes ranging from 1/4" to 3/4" inclusive in both S.A.E. Flare and O.D. solder connections. Designed with renewable lower stem seat and raised body seat.



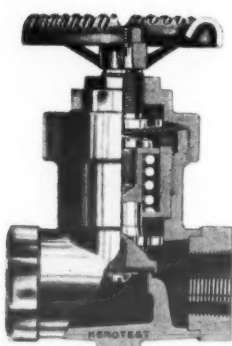
ANGLE VALVES

In a number of combinations of side outlet and bottom outlet connections. Side outlet sizes range from 1/4" to 3/4" S.A.E. Flare and 1/4" to 1 1/8" O.D. solder connections. Bottom outlets from 1/4" to 3/4" male pipe or 1" female pipe.



3-WAY TYPE

Especially designed for ice cream cabinet, high vacuum, instantaneous freezer and other heavy duty services. Raised body seats provide less restriction to flow than needle type body seat. Available in 18 standard sizes.



GLOBE VALVES

Heavy duty valves for all plant and high vacuum, commercial and air conditioning services. Renewable lower stem seat assures years of economical service. Made in all sizes from 1/8" female pipe to 1 1/2" O.D. solder connections.

KEROTEST

KEROTEST MANUFACTURING CO.

PITTSBURGH, PA.

sold by the branches are replaced daily from this source. This operation is handled by a perpetual inventory system, which permits Mr. Larson to check what has been sold, and what is on hand, in any one of the branches every day. Thus the branches are seldom "out" of any one item, and Mr. Larson knows what is going on every minute.

When the new Milwaukee headquarters was opened in January of this year, Mr. Larson held a two day "open house." At this time over 700 customers visited the store to look over the new main office.

Fred Barney is in charge of the Rockford, Ill. branch of the G. A. Larson Co., James Vinje handles Oshkosh, and Vincent J. Sweeney manages the Madison store.

Sales are handled by Mr. Larson, president of the concern, and by Richard F. Leibly, secretary and treasurer, Harold Zentner, Edward P. Burke, who makes his headquarters at Green Bay, Wis., and George Knight, at Rockford, Ill. These five travel the entire territory covered by the Larson company, calling on refrigeration firms.

Employees doing inside work at Milwaukee are Ray Sweeney, Edward King, and Roland Neep, while Mack Bennett and Carl Thornell work in the Madison store. Gertrude Hundt and Vertrude Stoner handle bookkeeping and secretarial work at the Milwaukee headquarters.

G. A. Larson Co. is a member of the National Refrigeration Supply Jobbers Association.

Beckett Electric Opens New Headquarters

DALLAS, Tex.—Beckett Electric Co., Inc., distributor of a wide line of appliances, refrigeration supplies, and equipment, and manufacturer of Air-O-Line ventilating equipment and evaporative coolers, has recently moved into a new six-story building at McKinney Ave. and Griffin St.

Formal opening of the new location was observed on March 30, with an open house to which both customers and suppliers were invited.

Equipped with modern business conveniences in all departments, the company's new location has more than 120 feet of head-in parking space on the street fronting it, and large parking lots for customers on two other sides of the building. With more than 7,500 items in stock, the company claims to be one of the largest independent electrical jobbing institutions in the South.

Thomas G. Beckett is president of the company; Thomas G. Beckett, Jr., is vice president and president of Beckett, Gilbert Co., Inc.; J. W. Johnson is treasurer; Earl T. Summers is sales manager; and P. H. Rawlinson is service manager.

Dewey Nichols Moves

BELOIT, Wis.—Dewey Nichols has moved his Electric Shop here from 129 West Grand to 205 West Grand. The firm is Kelvinator dealer.

Smallest
or
Largest—

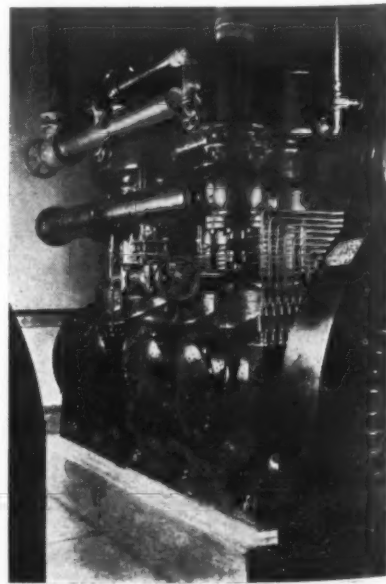
There's more COLD per dollar in



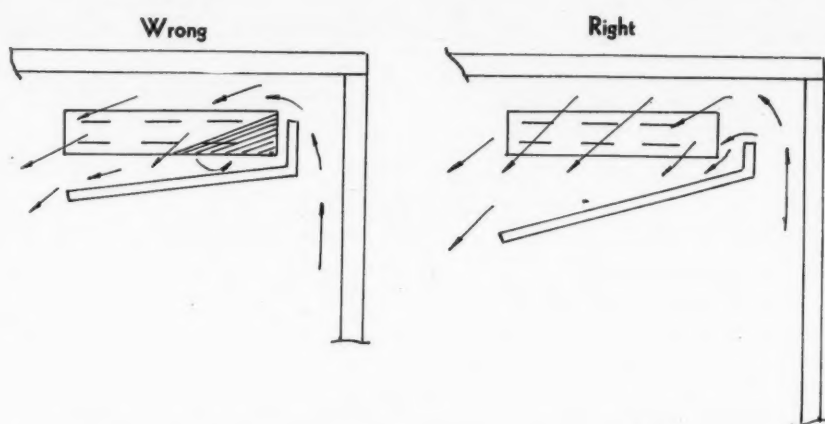
Refrigeration

Which accounts for the steady demand Frick Equipment has enjoyed since the early 80's. The Frick Line includes machines for methyl chloride, "Freon-12," and ammonia. Get full information now: write

Frick Co., Waynesboro, Penna.



Making the Baffle Problem Less Baffling



At the left is an illustration of a wrongly installed baffle, according to H. C. Pullen of Air Coils, Ltd., Canadian firm. Arrows indicate the path of the air travel over the coil, and the shaded area is the part of the coil that is not being put to any use because of the poor baffle arrangement. At the right is a correctly installed baffle, as Mr. Pullen explained it to installation and service engineers attending the recent First Canadian Refrigeration & Air Conditioning Exhibition in Toronto.

'Install the Baffle Correctly and You'll Eliminate 90% of Coil Trouble,' Says Pullen

TORONTO, Ont., Can.—"In analyzing cases of refrigeration service problems in which the coil was thought to be at fault, we have found that in at least 90% of the cases the fault rests with faulty baffles, which do not provide proper air circulation," declared H. C. Pullen of Air Coils, Ltd., in a talk before the First Canadian Refrigeration & Air Conditioning Exhibition held here earlier in the month.

"Fig. 1 shows actual baffle installations which we have found," explained Mr. Pullen. "Note the only possible course for the movement of air and particularly note that a great percentage of the coil is idle.

"When the coil is idle due to the lack of air movement it will ice up, which in turn causes dehydration, frostbacks, and various other complications.

"This circulation fault is sometimes hard to detect, but the service engineer should always try to analyze air movement in the box before closing expansion valves, etc., in an effort to eliminate various troubles. "Fig. 2 illustrates the same coil with the same baffle properly located. I believe this illustration makes it clear as to what happens to air movement in a box, and how this proper air movement will really make the coil work."

Refrigeration Installed To Set Dam Concrete

RUTLEDGE, Tex.—To dissipate the great amount of heat which will be generated by the setting of the concrete in the \$11,000,000 Marshall Ford Dam now under construction here, this dam will be completely refrigerated by York equipment.

Piping will be built into the dam as the concrete is poured, and a 175-ton York ammonia system will be used to cool 720,000 gallons of water per day to 40° F. and then circulate it through these pipes. It is estimated that in this way the dam will be cooled in two or three months, whereas it would take several years to cool through natural processes.

The surprising amount of heat generated by the wet concrete as it sets is quickly dissipated to the air in such ordinary construction jobs as roads, walks, or masonry, but in a massive body of concrete such as that in the new dam being built here the matter of heat dissipation becomes a real problem.

In tests of existing dams, interior temperature of well over 100° F. have been encountered several years after these projects have been completed.

N. Y. Water Curb Misses Jobs Under 25 Tons

(Concluded from Page 1, Column 2) consumed falls far under the minimum yearly amount.

An official of the Department of Water, Gas & Electricity affirmed this interpretation of the rules. "The regulations," he agreed, "will in reality apply only to units of about 25 tons capacity or more."

At the same time this official disclosed that an investigation, similar to that which preceded the regulations with regard to air conditioning, has been begun for the commercial refrigeration field.

Those users of mechanically refrigerated air conditioning equipment who must comply with the regulations, are faced also with the necessity of complying with local safety code regulations on mechanical refrigeration. Of particular significance are regulations against the running of refrigerant tubing beyond one floor, and another which forbids the discharge of air from an air conditioning system less than 6 feet above the street level.

The latter might present a problem where a user would want to install an evaporative condenser in the basement.

Ideal Names Agents In 3 Territories

ST. LOUIS—Joe Walker Sales Co. of St. Louis has been appointed distributor for the entire state of Texas for the Ideal Beer Cooler Co. The Joe Walker Sales Co., operating a field force of 16 men, will also retain the Ideal distributorship for the state of Illinois in which it has operated for more than two years.

The Albert O. Stein agency with headquarters at Danville, Va. has been appointed representative for Ideal beer coolers for the southwestern territory including Virginia, W. Virginia, the Carolinas, Georgia, and eastern Tennessee and distributors are now being appointed in that territory.

Finney Bros. Distributing Co. of Indianapolis has been named distributor for Ideal for the central Indiana territory.

Cuddeback To Handle G-E Commercial In Detroit

DETROIT—H. C. Cuddeback, Inc., 5733 Grand River Ave., has been appointed Detroit distributor of the entire line of General Electric commercial refrigeration and air conditioning products. This includes condensing units, water coolers, food storage equipment, beverage coolers, packaged air conditioning units, and air circulators.

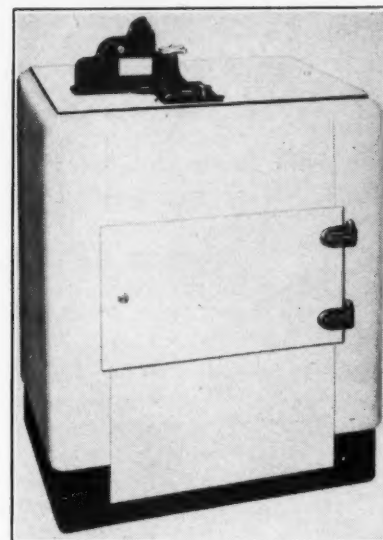
Mr. Cuddeback has been in the refrigeration field since 1922, handling Frigidaire equipment.

Minnesota Serviceman Sells 10 Produce Cases

MANKATO, Minn.—Indicative of the results that a refrigeration service organization can obtain by giving a concentrated sales push to commercial refrigeration equipment is the record hung up in one month by J. A. Mayer, of the J. A. Mayer Refrigerating Co. here, with the "Veg-I-Case" manufactured by C. L. Percival Co., Des Moines, Iowa.

The Veg-I-Case, a produce display unit of the open-top type, has been in the Percival line for about two years, but it was only a little more than a month ago that Mr. Mayer decided to give it an active sales whirl. He ordered a model for his display floor, and since then has sold about ten of these cases in the 8 and 14-foot lengths.

'Requested' Features In New Pelco Vender



BLOOMINGTON, Ill.—Portable Elevator Mfg. Co.'s new model 326 beverage cooler is claimed by the company to meet demands for a vending cooler operating on the dry refrigeration principle.

The coin mechanism is simple and said to be trouble free. Large capacities are provided in the vending drum and pre-cooling compartment. It is fully selective, and bottles stand upright.

Cooling is through forced air circulation throughout the cooler. Refrigeration is furnished by a 1/4-hp. commercial refrigeration compressor.

Vending unit is cast aluminum and brass. All mechanical parts are enclosed. The unit is insulated.

Eau Claire Dealer Moves

EAU CLAIRE, Wis.—The ABC Sales Co. has moved from its former quarters at 209 N. Barstow to new location at 127 N. Barstow St. The firm handles Crosley refrigerators.

'Package' Line Shown By Westinghouse

EAST SPRINGFIELD, Mass.—Westinghouse is introducing its packaged line of commercial refrigeration and air conditioning products at a series of one-day sessions in 75 cities throughout the country.

Four groups of packaged products are being stressed—self-contained room air conditioners, packaged commercial refrigerators, air conditioners up to 5 tons for homes and shops, and water coolers. Selling methods, the market, the product, financing, and promotion of each of the four lines is explained at each meeting. Slide films are interspersed between talks and discussions.

Commercial refrigeration part of the program includes various aspects of commercial display cases, reach-in cabinets, beverage coolers, milk coolers, water coolers, and commercial fans. Air conditioning features store coolers from 1 to 5 tons capacity, and three new Mobilaires.

capillary tubes

REG. U. S. PAT. OFF.

Ansul Ice-X is the doctor that gives frozen units immediate relief. It ends ice trouble.*

Ice-X is hazard-free, safe, easy to use, fully machine tested.

NEW HALF-PINT SIZE—A new smaller size, handy for the service man, in addition to pints, quarts, and gallons. Order a can from your nearby Ansul jobber today.



PREVENTS NEW ICE

ANSUL ICE-X is equally effective with methyl chloride, acrolein methyl chloride, methylene chloride, and all "Freon" refrigerants. It will not react with refrigerants or oil. It leaves no residue. It will not corrode.

* Ice-X will not cure troubles caused by wax, sludge, dirt, or mechanical difficulties.

ANSUL CHEMICAL COMPANY
MARINETTE • WISCONSIN

25th Anniversary Year... 1915-1940*

SERVICE CALLS HAVE SURE BEEN CUT DOWN ON OUR NEW EQUIPMENT

THOSE WAGNER MOTORS DID THE TRICK!

WAGNER MOTORS

BUILD CUSTOMER ACCEPTANCE FOR YOUR EQUIPMENT

The dependable performance of Wagner motors on stokers, refrigerators and air-conditioning equipment minimizes service calls, enabling the dealer to keep his profit on the sale.

This record of performance of Wagner motors increases the sales possibilities of Wagner-motored equipment and appliances through increased confidence of users and dealers.

Realizing the value of this established user acceptance, alert dealers are quick to tell their prospective customers that the appliances they sell are equipped with Wagner motors.

Bulletins MU-177 and MU-182 give you complete information on Wagner motors. The coupon below will bring your FREE copies.

MAIL COUPON TODAY

WAGNER ELECTRIC CORPORATION M 40-13
6400 Plymouth Avenue AC&RH
St. Louis, Missouri

Gentlemen:
Please send me FREE bulletins MU177 and MU182.

Name _____
Firm _____
Address _____
City _____ State _____

Wagner Electric Corporation

6400 Plymouth Avenue, Saint Louis, Mo., U.S.A.

MOTORS • TRANSFORMERS • FANS • BRAKES

Miller LINE OF
REPLACEMENT DOOR GASKETS
NOW INCREASED TO
34 TYPES

- Permits Servicing of 80% of All Boxes Regardless of Make

Prices, Specification Sheet and Name of Nearest Miller Jobber Supplied on Request

MILLER RUBBER CO., INC. AKRON OHIO
"Engineers in Rubber"

Formulas For Heat Transfer Factors In Double Tube Heat Exchangers

Correlation of Data To Permit Quick Calculations

By Hal Weir McPherson, Sales Manager, The Electrimatic Corp.

The findings herein reported are the results of test work begun in 1930 on the heat exchange in milk coolers and in milk pasteurizers. For many years it has seemed impossible to correlate this data to other applications; however, in the past few years, the writer has noticed two relationships which now make such a correlation possible. These relationships hold for all cases studied, and it is the writer's belief that they may be universally true. Controversy on these two principles is herewith invited by their statement below.

1. Heat transfer for turbulent flow in a viscous fluid is a function of the number of and nature of molecules passing and is entirely independent of the state of the fluid.

By this principle, the question of just what the velocity is inside of an evaporator or a condenser seems to be very simply answered by considering the equivalent liquid velocity only and neglecting what the actual velocity of the fluid or gas may be. In fact, the actual velocity of the gas or liquid mixture would have to be arrived at by integration, which would be difficult. For practical work, the equivalent liquid velocity for common refrigerants may be arrived at with sufficient accuracy by reference to Table 1.

Definition of Equivalent Liquid Velocity (E.L.V.):

The E.L.V. is the velocity which would occur if the fluid passing through the "pipe" were in a liquid state.

2. "Turbulent flow" may be assumed for heat transfers involving change of state, no matter how low the velocity.

The objection to Sherwood & Petrie's theoretical solution of the present problem, is that there are two coefficients which must be experimentally determined to arrive at the value of K. I have found it more convenient to arrive directly at the value of K from experimental data which I have accumulated during the past years. (See Fig. 1.)

Note: While Fig. 1 represents the assemblage of my experimental data, it is of interest to note that Stickney finds the resulting curve conforms closely to the equation:

$$K = C \sqrt{V_1 \times V_2} = 136 \times \sqrt{V_1 \times V_2}$$

A very substantial part of this data in the higher values of K was derived by measuring heat transfer between brine or water and milk

*The value C = 136 is only approximate. Ranges from 130 to 142.

Table 1—Refrigerant Circulated Per Ton Capacity

Refrigerant	Lbs./Min.	G.p.m.	Equivalent Liquid Velocity F.p.s./Sq. In.
"Freon-12"	3.916	0.3500	1.125
Methyl Chloride	1.331	0.1736	0.556
Sulphur Dioxide	1.415	0.1220	0.392
Ammonia	0.421	0.0828	0.266

CHIEF among the many reasons why servicemen prefer Williams Ice-O-Matic commercial refrigeration is the exclusive oil rectifier. No raw refrigerant can circulate within the oil. It means a dry crank case—ends oil slugging.

Top quality at fair prices is what you get with Williams Ice-O-Matic refrigeration. Find out about its many advantages. Write for details now.

HERE ARE A FEW REASONS WHY ICE-O-MATIC EXCELS

Precision manufacture—tolerances as close as one ten-thousandth of an inch. Positive force feed lubrication to all bearings.

Patented oil rectifier.

Bronze main bearings and wrist pin bearings.

Extra large capacity refrigerant receiver. Oversize condenser surface.

WILLIAMS OIL-O-MATIC HEATING CORPORATION
Manufacturers of Oil-O-Matic—Ice-O-Matic—Air-O-Matic
BLOOMINGTON, ILLINOIS

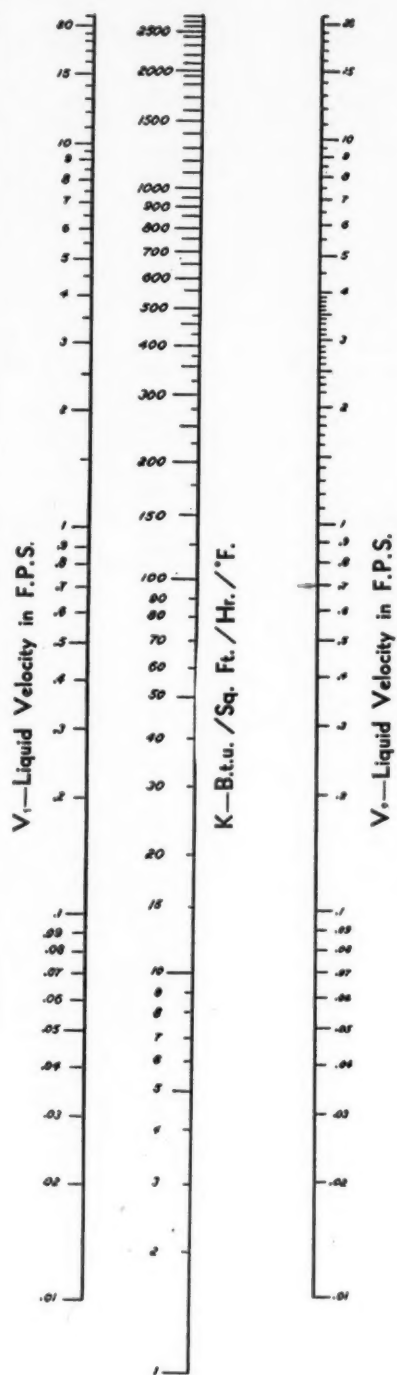
ACCURACY

You get it in WOLVERINE TUBING



WOLVERINE TUBE CO. DETROIT

Fig. 1—Velocity Scale



separated by clean, stainless tube walls. Most of the data in the lower values was measured for the heat transfer between boiling or condensing refrigerant and water separated by copper or by iron pipe walls. The fact that these entirely different media produced a curve which was continuous (see Fig. 1) when theorems 1 and 2 are used, leads to several surprising and highly useful conclusions. One of which is: that the difference in heat transfer rate for water, milk, brine, refrigerants, and similar fluids is negligible for practical work.

Most of my observations were made with new equipment, and I have no way of checking statements in regard to reductions in heat transfer due to scale and dirt on the surfaces.

The factor V or E.L.V. is arrived at by assuming the refrigerant to be circulated through a 1 sq. in. opening, using the equation:

Equation 1:

$$\text{G.p.m.} \times 231 = \text{F.p.s.} = V$$

$$12 \times 60$$

A few tests conducted with the same double tube heat exchanger used for various duties are given below to illustrate the use of Fig. 1, Equation 1, and Table 1.

Equipment: Double-tube counter-flow heat exchanger (1½" × 2").
Internal cross section of 1½" = 1.540 sq. in.
Internal cross section of 2" = 2.750 sq. in.
External cross section of 1½" = 1.767 sq. in.
Annular cross section between 1½" & 2" tubes = 0.983 sq. in.

EXAMPLE NO. 1—MILK COOLING

Problem: Assuming there are 5,000 pounds of milk per hour to be circulated through the 1½-inch pipe (milk velocity, V₁ = 2.0075 f.p.s.).

Assuming 15 g.p.m. of brine passing through annular space (brine velocity, V₂ = 4.83 f.p.s.).

Answer: From these velocities we find from Fig. 1 that

$$K = 425 \text{ B.t.u./sq. ft./hr./°F.}$$

EXAMPLE NO. 2 CONDENSING AMMONIA

Problem: Assume the capacity of the ammonia compressor = 10 tons and water flow = 30 g.p.m.

Water velocity through 1½-inch tube = 6.38 f.p.s. = V₁. Equivalent liquid velocity of ammonia

$$10 \times 0.266 / .983 = 2.70 \text{ f.p.s.} = V_2$$

Answer: From these two velocities we find from Fig. 1 that

$$K = 560 \text{ B.t.u./sq. ft./hr./°F.}$$

EXAMPLE NO. 3 DX WATER COOLING

Problem: Assume that 5,000 lbs. of water per hour are to be circulated through the 1½-inch pipe, water velocity 2.0075 f.p.s. = V₁.

Evaporator capacity to be assumed at 10 tons.

Equivalent liquid velocity of ammonia = 2.70 f.p.s. = V₂.

Answer: From these two velocities we find from Fig. 1 that

$$K = 320 \text{ B.t.u./sq. ft./hr./°F.}$$

EXAMPLE NO. 4 RECIRCULATING REFRIGERANT

Condition and Problem: Using Example No. 3, with a recirculating pump having a capacity of 4.14 g.p.m. on the liquid ammonia, we increased the velocity of ammonia 5 times to a total of 13.5 f.p.s. = V₂. The water velocity remains 2.0075 f.p.s. = V₁.

Answer: From these two velocities we find from Fig. 1 that

$$K = 710 \text{ B.t.u./sq. ft./hr./°F.}$$

EXAMPLE NO. 5 WATER HEATING WITH STEAM

Problem: Steam consumption measured as condensate = 10 lbs. of steam per minute.

Equivalent liquid velocity of steam through annular space

$$10 \times 1728 = 0.376 = \text{f.p.s.} = V_2$$

$$60 \times 12 \times 62.5 \times .983$$

Water flow 30 g.p.m. Velocity of water through 1½-inch tube = 6.38 f.p.s. = V₁.

Answer: From these two velocities we find K = 210 B.t.u.

Note: The two velocity scales in Fig. 1 are labeled V₁ and V₂. However, it is immaterial which scale is which.

'Service Contracts Make Servicemen Sell' Theory Of Alabama Concern

DOTHAN, Ala.—"We service men tend to get lazy at times, and when we're operating on an individual call basis we often yield to the temptation to just sit back and wait for business to come in. The service contract, on the other hand, gives us something tangible to get out and sell the prospective customer."

That is the way H. D. Hand, of Hand Bros., explains why his firm specializes in servicing commercial refrigeration equipment on a contract basis. "Of course," he declared, "if the prospect doesn't think well of this proposition we are glad to handle the work on a job basis."

The company contacts individual restaurant owners, druggists, beverage stand operators, and other users of commercial refrigeration equipment, inspects their equipment, and then offers to keep it in operating service for one year for a fixed sum.

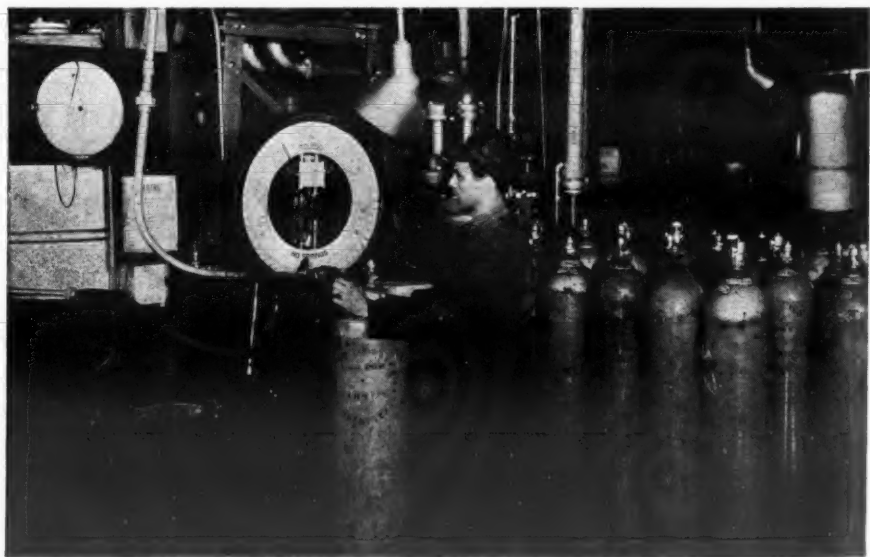
The fee quoted depends upon the amount of equipment and its condition, but in most cases averages less than would charges for individual service calls during the year. The owner of the equipment may pay up his contract in two or three instalments, if he desires.

"Before entering into any servicing contract," Mr. Hand stated, "we make certain that the equipment is in good operating condition. Only recently one owner, whose equipment needed at least \$75 worth of repairs, tried to get us to take his service contract for \$30. We declined."

"We aim to take care of the unexpected interruptions which cannot be anticipated in advance. It may be a breakdown, but more than likely it is merely a matter of some part of the equipment being out of adjustment."

Adds Anemostats

HARTFORD, Conn.—Marsden & Wasserman, Inc., supplies jobber here, has been appointed Connecticut distributor for products of Anemostat Corp.



150 LBS. NET—on the Nose

Exact Weight Simplifies Billing and Records for Virginia Customers

When you buy from your Virginia jobber, you know you're getting what you ask for. Virginia leads the field in guaranteeing standardized net weight in refrigerant cylinders to jobbers and service men—and Virginia's system of net weight control is foolproof.

Just another example of how Virginia's flexible service helps the Virginia jobber to help you.

EXTRA DRY ESOTOO V-METH-L METHYLENE CHLORIDE



VIRGINIA SMELTING

COMPANY

Located at Tidewater, Hampton Roads

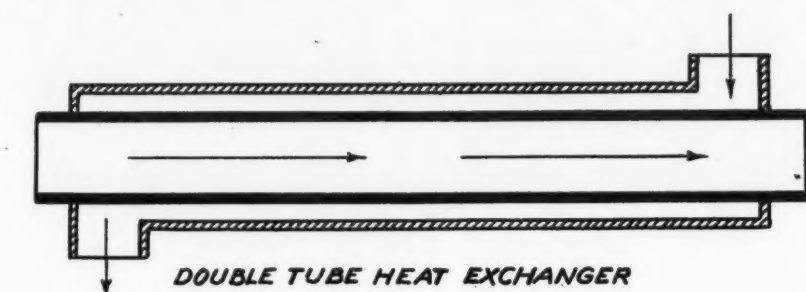
WEST NORFOLK — VIRGINIA

Pleasantaire

FINEST NAME IN AIR CONDITIONING
MOST VALUABLE FRANCHISE
in the WINDOW-TYPE FIELD

Pleasantaire Corporation, Tower Bldg., Washington, D. C.

Fig. 2—Examples of Double-Tube Applications



At the top is a drawing indicating the design of a double-tube heat exchanger. Below are illustrations of the conditions existing in the examples which are given in Mr. McPherson's article.

Frank Greusel Speaks For Trade Group

MANITOWOC, Wis.—Frank W. Greusel, Milwaukee, head of Greusel Distributing Corp. and vice chairman of the trade promotion division of the Milwaukee Association of Commerce, spoke at a luncheon at the Elks club here April 16 in connection with the association's annual trade tour.

Service Letters

Rex Maintenance Contract Plan

Rex Refrigeration Service, Inc.
2226 S. State St.
Chicago, Ill.

Editor:

We very much appreciate your article in the March 27 issue concerning our activities in the rebuilding and merchandising of completely rebuilt hermetically sealed refrigerating units. However, we believe you have not correctly portrayed our "Maintenance Contract Plan" on sealed General Electric and Westinghouse units to your subscribers.

This plan is primarily intended for the use of public utility companies and reputable appliance dealers and independent service organizations having adequate service facilities. It is intended to cover not only those machines taken in on trade in operating condition, but all of those machines now in service in the customer's homes.

Our maintenance contract is a printed agreement between Rex Refrigeration Service, Inc., and the ultimate consumer whereby the customer in consideration of the premium of the contract is assured for a one year period the following:

(1) All necessary mechanical adjustments on the sealed refrigerating unit will be made by the dealer who sells the contract under the terms of which there will be no charge for either labor or materials.

(2) Replacement of the complete refrigerating unit without charge to the customer in the event of total failure.

The exact wording of our complete contract is printed on pages 16 and 17 of the March 27 issue of the News. However, the selling price or premium of the contract is a figure left entirely to the discretion of the public utility company or the appliance dealer.

Since the utility company or the dealer assumes the field service obligation, they retain a large portion of the contract premium to enable them to profitably fulfill this operation. For example, the suggested contract premium on a given unit for a 6 or 7 cubic foot refrigerator seven to fourteen years old is \$8.50. Our charge for rendering the contract and assuming the replacement obligation is \$4.40, leaving the utility or dealer \$4.10 to cover their cost of selling the contract and handling

service for a year.

A copy of our maintenance contract schedule is enclosed and it is noted the utility and dealer costs for General Electric and Westinghouse sealed units varies from \$3.60 to \$6.40 per machine, and the suggested selling price from \$6.50 to \$12.

We believe that dealers with a competent service personnel will cover only those machines that are a reasonably good risk. In other words, it is neither to their advantage nor ours, to cover units that are not functioning properly due to float trouble, inherent mechanical defects, or with refrigerant lines that are very deeply corroded.

GEORGE E. REINCKE,
Manager, Wholesale Dept.

Dorex Odor Absorber

2106 Grand Ave.
Keokuk, Iowa

Editor:

Can you give me any information regarding the Dorex odor absorbers mentioned in the March 27 AIR CONDITIONING & REFRIGERATION NEWS. If you can give the name of the manufacturer that will suffice.

C. G. JEWETT

Answer: Dorex division of W. B. Connor Engineering Corp., 114 East 32nd St., New York City.

Refrigerated Venders

Marshall-Wells B. C. Ltd.
573 Carrall St.
Vancouver, B. C.

Editor:

In your Jan. 3 issue of the AIR CONDITIONING & REFRIGERATION NEWS there appears a paragraph relative to refrigerated milk vending machines. Will you kindly put us in touch with the manufacturers.

P. BRUTON

Commercial Refrigeration Sales Div.
Answer: See below.

Wetzel Appliance Co.
14 Genesee St.
New Hartford, N. Y.

Editor:

Will you please advise me the names of the manufacturers of what are known as vending coolers.

D. H. WETZEL,
President

Answer: Portable Elevator Mfg. Co., 926 E. Grove St., Bloomington, Ill.; Bally Mfg. Co., 2701 Belmont Ave., Chicago, Ill.; Glascock Bros. Mfg. Co., 1500 W. Fifth St., Muncie, Ind.; Kalva Venders, Inc., 1923 Marquette Ave., North Chicago, Ill.; Mills Novelty Co., 4036 W. Fullerton Ave., Chicago, Ill.

Refrigerant Cylinders

The Starr Co.
Richmond, Ind.

Editor:

Will you extend to us the courtesy of giving us the names of manufacturers of small cylinders used for the storage of gas.

C. GENNETT

Answer: Pressed Steel Tank Co., 6637 W. Greenfield Ave., Milwaukee, Wis.; Prest-O-Lite Co., 30 E. 42nd St., New York City.

Grunow Service Data

Electric Repair Shop
Box 55, Gouverneur, N. Y.

Editor:

Do any of the Master Service Manuals cover the Grunow refrigerator? If so send that particular one C.O.D.

If you do not have this will you inform me as to where one could be obtained.

ELECTRIC REPAIR SHOP

Answer: The Master Service Manuals do not cover service instructions on the Grunow household electric unit. However, we published a series of articles giving complete information on the Grunow household elec-

tric refrigerator in the News last fall; the issues being those of Sept. 20, Sept. 27, Oct. 4, Oct. 11, and Oct. 18. Copies of these issues are available at a cost of 20 cents each or \$1.00 for the set.

His Library Grows

539 Melrose Ave.
Ambridge, Pa.

Sirs:

Inclose find \$2 for which send me Manual B-1, How to Select and Install Air Conditioning Systems, and Household Manual No. 2. I bought a few books on commercial refrigeration and am very much pleased.

TED SKOPINSKI

GET **PEAK** PERFORMANCE
with **SPORLAN**
Controlled **TV**
Performance **VALVES**

WRITE FOR OUR CATALOG
for Better Coolers

Dealers and distributors
write for particulars

UNITED REFRIGERATOR MFG., INC.
1303 UNIVERSITY AVE. ST. PAUL, MINN.

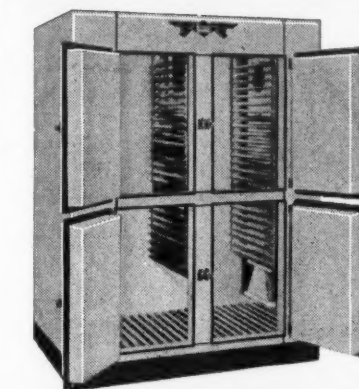
RETARDO

ANOTHER NEW SALES OUTLET FOR COMPRESSORS

Sherer's RETARDO offers 72 hour retardation... increases bakery profits — will increase your equipment and compressor sales... Cash in on this new field. Sell a RETARDO and a compressor... RETARDO is only ONE number in the profit line for '40.

Ask for franchise details, mentioning territory covered.

SHERER-GILLET COMPANY
MARSHALL, MICHIGAN



A MODEL FOR EVERY NEED

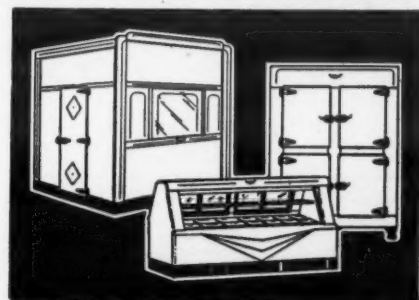
Widest variety of standard stock sizes and styles in the industry.

The one-quality—all porcelain line.—

Protected by
Famous Fogel Lifetime Vision.
Hundreds of successful dealers.
Some territories still available.

INQUIRE TODAY

FOGEL REFRIGERATOR COMPANY Since 1899
16th & Vine Sts., Phila., Pa.



TYLER
LEADS AGAIN
FOR 1940

● Tyler dealers and distributors have an even bigger sales and profits advantage for 1940. The new Tyler line again steps ahead of the field with exclusive improvements, massive new beauty, and new models that open still wider sales fields. Tyler's perfected Welded-Steel construction and Tyler's standardized, large scale production create unmatched values. With the Tyler line you'll find it easy to step up your volume and profits. Your territory may be open. Write or wire—today.

TYLER FIXTURE CORP., Dept. E, NILES, MICH.
New York Office: 601 W. 26th St. Boston Office: 683 Beacon St.
Chicago Office: 1663 W. Ogden Ave.

TYLER Refrigerators
WELDED STEEL

MASTERCRAFT ADJUSTABLE PAD and CARRYING HARNESS



Lettering on pad at only \$1.00 per order extra. Write for latest folder and prices on pads for refrigerators, washers, ironers, ranges, radios, etc.

BEARSE MANUFACTURING COMPANY
INCORPORATED 1921
3815-3825 Cortland Street, Chicago, Illinois

Anaconda Copper Refrigeration Tubes



THE AMERICAN BRASS CO.
FRENCH SMALL TUBE BRANCH
General Offices: Worcester, Mass.

Yes, Sir!!
RIGHT AWAY!



When The Quick Call Comes—

—for service in a hurry—depend on Ranco. Ranco offers you the world's most complete line of Household Refrigerator Replacement Controls—and far more Exact Replacements than any other line.

A quick, easy job—another customer made happy—and a nice profit for you!

Ranco Controls—built to save the time of service men!

RANCO Inc., Columbus, Ohio, U.S.A.

REMPE Knows
FIN COILS
PIPE COILS
ask REMPE
340 W. Washington Blvd., Chicago

Dealers Meet In Sheboygan

SHEBOYGAN, Wis.—The Mullen Service Co. was host April 18 to a group of 30 Westinghouse electrical appliance dealers at a special meeting. Jess Kaiser of the Milwaukee Westinghouse office was in charge.



A complete line to meet every requirement

With nearly 40 years experience as a background . . . the Puro line offers every dealer unusual profit opportunities. Write.



ELECTRIC WATER COOLERS
Puro Filter Corp. of America, 440 Lafayette St., New York.

IMPERIAL CAPACITY BOOSTERS (Heat-X-Changers)

—with Thermek Heat Transfer Surface

1. Raises back pressure of coil and increases compression efficiency.
2. Utilizes 100% of the coil surface.
3. Reduces friction in the tubing.
4. Eliminates oil scrubbing.



IMPERIAL BRASS MFG. CO., 565 S. Racine Ave., Chicago

Ask your jobber for Imperial Catalog Page No. 54-B covering these capacity boosters.

IMPERIAL

VALVES • FITTINGS • TOOLS • STRAINERS
DEHYDRATORS • CHARGING LINES • FLOATS

GRUNOW AUTHORIZED SERVICE, INC.

THE ONLY MANUFACTURER OF
GENUINE CARRENE METER ASSEMBLIES

4313 FULLERTON AVE., CHICAGO, ILL.



MORE PROFITS IN 1940

DICELER 4 CYLINDER CONDENSING UNITS

Learn how you, too, can gain greater sales and increased profits by writing for the DICELER catalogue including compressors and condensing units from 1/2 to 30 H.P.

THE CONDENSING UNIT LINE WITH EXCLUSIVE FEATURES
DEISSLER MACHINE COMPANY Greenville, Pa.
Export Dept., 100 Varick Street, New York.
PIONEER OF FOUR CYLINDER REFRIGERATION



Chieftain

Investigate Our New Models—

Priced to give you large savings on units. Sizes—1/4, 1/2 and 1 1/2 horse power. Large receiver capacity—oversize condenser. Overall dimensions reduced to a minimum. Particularly designed for display cases, reach-in boxes and other self-contained applications.

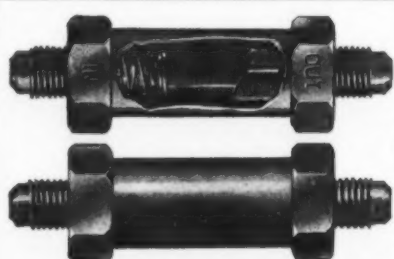
WRITE FOR INFORMATION ON THE NEW "Y" MODELS
TECUMSEH PRODUCTS CO., TECUMSEH, MICH.
Canadian distributor: Refrigeration Supplies Co., Ltd., London, Ontario

HENRY

Balanced-Action
DIAPHRAGM PACKLESS VALVES
No Tube Bending
Because of the exclusive
PORTS-IN-LINE DESIGN



RECOMMENDED AND SOLD BY LEADING JOBBERS



AMINCO PURIFIER

Removes moisture, dirt, acids, carbon & gum

Purifier contains cartridge of paper-thin discs of synthetic material, not affected by refrigerant. Liquid entering at inlet end flows around outside of cartridge. The liquid pressure plus capillary attraction between discs forces liquid through cartridge to outlet. All dirt, carbon, wax, and liquids with different specific gravity than refrigerant, such as acids and moisture, stays on outside of cartridge and settles to bottom of shell. Sizes from 1/4" to 3/4" S.A.E. and 3/8" to 1 1/2" solder.

AMERICAN INJECTOR COMPANY

1481-1491 FOURTEENTH AVENUE, DETROIT, MICH.
Pacific Coast: Van D. Clothier, 1015 E. 18th, Los Angeles, Calif.
Export: Borg-Warner International Corp., 310 S. Michigan Ave., Chicago, Ill.

Selection of Salesmen To Be Discussed At Management Congress

NEW YORK CITY—Members of the electrical industry will participate prominently in sessions of the annual marketing conference of American Management Association April 24 and 25 in Hotel Roosevelt. Problems of sales personnel, methods of market research, and the use of sales presentations are among topics which will feature the program, planned by E. O. Shreve, vice president of General Electric Co., and Irwin D. Wolf, vice president of Kaufmann department stores.

Mr. Shreve will preside at the opening session, devoted to problems of sales personnel.

CLASSIFIED ADVERTISING

RATES: Fifty words or less in 6-point light-face type only, one insertion, \$2.00, additional words, four cents each. Three consecutive insertions, \$5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

BUSINESS OPPORTUNITIES

FOR SALE—The oldest commercial refrigeration service business in the South, located in the heart of a city of 350,000 people. If interested, address Box 1227, Air Conditioning & Refrigeration News.

BRAND NEW 1/4-1/2-1/2-1/2 H.P. 25 and 40 cycle motors, capacitor type cradle base for sale individually or in lot. Contact ASSOCIATED REFRIGERATOR PLANT, INC., 3028 W. Hunting Park Ave., Philadelphia, Pa.

MY CLIENT, a retired refrigerator manufacturer, desires to re-enter the refrigeration industry. He is interested in financing the manufacture of any worth while commodity related to refrigeration or air conditioning, particularly the manufacture of items covered by patents or patents pending. Write: CHARLES PINCUS, Attorney, 9 E. 40th Street, New York City.

FRANCHISES AVAILABLE

DIRECT FACTORY CONNECTION. Sell refrigerated display cases, walk-in coolers, reach-in refrigerators, refrigerating units, to meat markets, grocers, taverns, etc. Financing arrangements to help sell. Write Dept. A for full information or see EHRICH REFRIGERATOR MFG. CO., St. Joseph, Mo.

EQUIPMENT WANTED

WE BUY SURPLUS, discontinued stock of refrigeration parts, controls, gauges, expansion valves, valves, regulators, compressors, units, evaporators, belts, trays, hardware, fittings, motor parts, condensers, and motors. Submit quantity and price or send sample. ADAMS SUPPLY CO., 2074 Webster Ave., New York, N. Y.

WE BUY UP manufacturers, jobbers, dealers bankrupt surplus and discontinued merchandise and equipment. We are interested in motors, compressors, controls, valves and parts. Send us a list of equipment you have. R & R REFRIGERATION CO., 508 Morris Ave., Bronx, N. Y.

EQUIPMENT FOR SALE

QUANTITY OF 2 row 9 pass condensers brand new, suitable for use on 1/4 and 1/2 h.p. units—\$2.00 each. Also Spanton and Gibson compressor bodies complete with pistons—\$3.95 each, used re-fillable 2" dryers, 75¢ each. Syntrol Spanton-Gibson seals—\$3.75. ASSOCIATED REFRIGERATOR PLANT, INC., 3028 Hunting Park Ave., Philadelphia, Pa.

BRAND NEW General Electric and Frigidaire units complete with pressure control: 1/4, 1/2 and 1/2 Horse Power. New 1/4 and 1/2 Horse Power Frigidaire compressors. New 1/4 and 1/2 Horse Power General Electric bent over compressors. All brand new merchandise packed in individual cartons. GENERAL REFRIGERATORS CORP., 518 East 20th Street, New York City.

FOR SALE at ridiculously low prices for cash. Approximately 125 five cubic foot, top mount electric refrigerator cabinets. Porcelain interior, white Duco exterior finish on bonderized steel. For further details write THE MAINE MANUFACTURING COMPANY, Nashua, New Hampshire.

REPAIR SERVICE

G. E. DR1—DR2—\$27.00; Domestic Westinghouse \$27.00; one year unconditional guarantee. Place order for any model G. E. or Westinghouse sealed unit. Shipment will be made from stock same day. Return old unit later. Our production line turns out completely rebuilt sealed units mechanically comparable to manufacturer's with replacement service inferior to none at prices that enable you to realize profit on resale. Send for complete replacement schedule. REX REFRIGERATION SERVICE, INC., 2226 S. State, Chicago, Ill.

FREE HERMETIC CATALOG complete with prices on refrigerator units, rebuilding and exchange service. General Electric, Westinghouse, Majestic, Frigidaire and a complete stock of Grunow compressors and parts. Immediate shipment. For your copy specify catalog A. SERVICE PARTS COMPANY, 1101-3 North 24th Avenue, Melrose Park, Illinois.

CONTROL REPAIR service. Your controls repaired by expert mechanics, with special precision equipment. Supervised by graduate engineers. We stress perfection and dependability before price. One year guarantee on domestic controls. Any bellows operated device repaired. HALELECTRIC LABORATORY, 1793 Lakeview Road, Cleveland, Ohio.

ADVERTISING SERVICE

WE COMPILE effective advertising—Years of advertising sales experience enable us to write the copy for your advertising or work your copy into highly productive circulars, broadsides, catalogs or advertisements. (E. B. Muzarelli's advertisement this issue is our work.) Write CONSOLIDATED ADVERTISERS, 3520 Cherry St., Kansas City, Mo., or phone Valentine 9141.

ANNOUNCEMENTS

IN RESPONSE to many inquiries from both household and commercial refrigerator manufacturers, I, J. Brooke Kavanagh, am no longer associated in any functioning capacity with the Allied Store Utilities Company, or am I affiliated with any other refrigeration manufacturer at this date. Conferences with manufacturers interested in sales development in Pennsylvania and surrounding states mutually arranged. Box 1226, Air Conditioning & Refrigeration News.

PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

ASE
Frozen Food Lockers
SOLD ONLY THROUGH DEALERS
Give Extra Profits—
Certain Repeat
Business—
Send Today for All
the Facts
ALL-STEEL-EQUIP COMPANY, INC.
186 Kensington Avenue, Aurora, Illinois

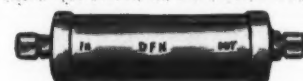
PENN Leads in
AUTOMATIC SWITCHES
AND CONTROLS
Write for Catalog
PENN ELECTRIC SWITCH CO.
GOSHEN, INDIANA

A New Improved Dehydrator
on the Market Soon
Look for Our Announcement
MUELLER BRASS CO.
Port Huron, Mich.

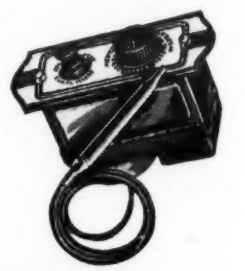
DISPLAY CASES
Write for details of
this sensational new
100% PORCELAIN
Display Case line.
MIDWEST
MFG. COMPANY
Galesburg, Illinois

THE BUYER'S GUIDE

SERVICE PARTS WHEN YOU NEED THEM



Yes, thousands of them, including the "hard to get" ones. Quick service by mail or at our 12 big branches.



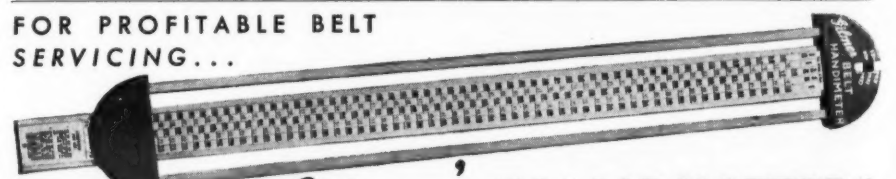
Write for our big catalog. It's FREE.

Please use your letterhead. We sell wholesale only.

THE HARRY ALTER CO.
1728 S. MICHIGAN AVENUE, CHICAGO, ILLINOIS
3 CHICAGO BRANCHES, NORTH, WEST, SOUTH

NEW YORK
BROOKLYN
BRONX
JAMAICA
NEWARK
DETROIT
CLEVELAND
ST. LOUIS

FOR PROFITABLE BELT SERVICING...



"EYE-FUL" TOWER BELT MERCHANDISER

consists of (1) "Handimeter"; (2) 35 Gilmer Belts displayed on (3) 15-inch diameter tower topped by display sign with perpetual inventory form on back; (4) copy of complete Gilmer Catalog. ALL FOR ONLY \$19.36!

Gilmer's "HANDIMETER"

It instantly measures any belt brought in, up to 75" long and between 3/4" and 1 1/4" wide—the majority of all belts for small drives. Gilmer's "Handimeter" is only one of the 4 repeat-business builders you get with Gilmer's "Eye-ful" Tower Belt Merchandiser! Order today . . . we'll bill you \$19.36 through your nearest Gilmer jobber.

L. H. GILMER CO., Tacony, Philadelphia

The Simplest and most Versatile Control
THE NEW POLARTRON
FOR PRESSURE CONTROL UP TO 1 H.P.A.C.
MINNEAPOLIS-HONEYWELL
MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
1001 FOURTH AVENUE, SOUTH, MINNEAPOLIS, MINNESOTA
REFRIGERATION Control

Be Sure that you sell the industry's leading Refrigeration Products. They'll not only make you money, but they will win you satisfied customers that will come back again and again! Larkin Products won't let you down because efficiency is built in every item.

See Your Jobber or Write today for New Catalog

LARKIN COILS, Inc.
519 Fair St., S.E.
ATLANTA, GA.
Originators of The Cross Fin Coil

Filtrine

Water Coolers—Filters
Cafeteria—Industrial
Commercial Remote
Surge Tanks Pipe Coils
Filtrine Mfg. Co., Brooklyn, N. Y.

TO GET YOUR
FREE COPY
SEE YOUR
ALCO JOBBER

ALCO VALVE CO.
2620 Big Bend Blvd., St. Louis, Mo.

Get These Profits
Refrigeration and insulation distributors
make an extra profit selling
HyDroLoc Individual Lockers
Write for particulars
Master Refrigerated Locker Systems, Inc.
121 Main St. Sioux City, Iowa
125,000 Masterbuilt Lockers In Use

Use **CHICAGO SEALS**
for seal replacements
A complete line in all sizes
CHICAGO SEAL CO.
20 North Wacker Dr., Chicago

CAMPBELL REFRIGERATOR CO.
Milwaukee, Wis.
Dealers Wanted for Midwestern and
Southern States

Sells Faster Because
It Cools Faster!
IDEAL SPEED COOLER
Ideal Beer Cooler Co.
2953 Easton Ave., St. Louis, Mo.

Simple to install—
and more money
for you.
See your jobber
TRADE MARK Rotary Seal Co., Chicago, Ill.

DEPENDABLE COILS
with the "FRICTION-GRIP"
HIGH CONDUCTIVITY BOND
BETWEEN FIN AND TUBE
McQuay Inc.
MINNEAPOLIS, MINN.

Jomoco
COMPRESSORS
Single and twin cylinder units.
Engineered and manufactured
to highest standards. Write
GALE PRODUCTS
1635 Monmouth, Galesburg, Ill.

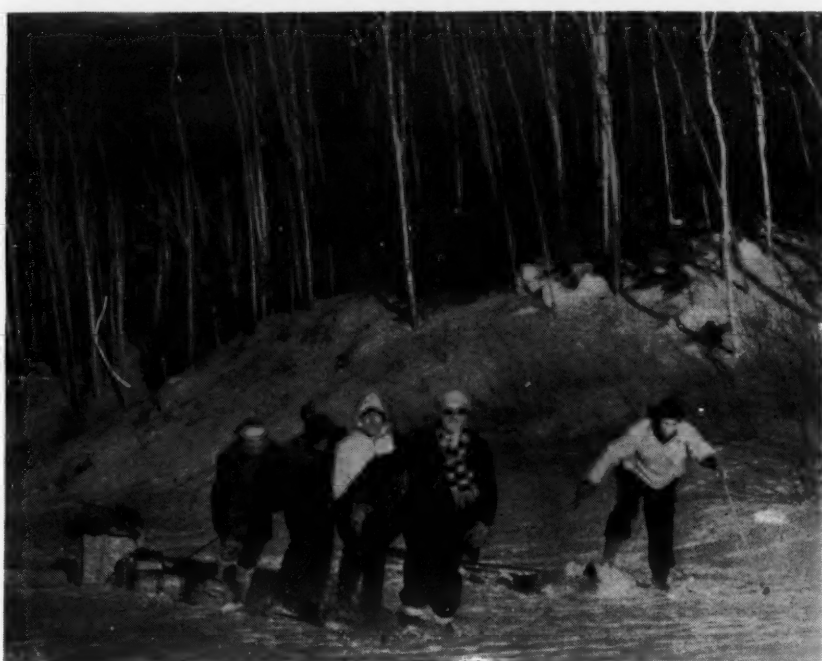
BUNDY TUBING
Copper-Brazed Steel. Cop-
per Coated Inside and
Out. Sizes: 1/8" to 3/4" O.D.
BUNDY TUBING CO., DETROIT

Condensing Units for every
commercial refrigeration
and air conditioning re-
quirement . . . Also
packaged air conditioners.

CURTIS
REFRIGERATION
AIR CONDITIONING
AND COMMERCIAL
Established 1854
Curtis Refrigerating Machine Co.
Division of Curtis Manufacturing Co.
1912 Kienlen Ave., St. Louis, Mo.

Dayton
V-BELTS
Silent, vibrationless, de-
pendable, long-lasting.
Powerful grip prevents
slippage. A nearby dis-
tributor carries a com-
plete stock for appliances
and machines.
THE DAYTON RUBBER
MFG. CO., DAYTON, OHIO
World's Largest Manufacturer of V-Belts

It's Cold In Them Thar Hills



Hauling television equipment up Whiteface Mountain, New York, for a record distance test. It took six hours to go five miles, most of it by moonlight, in 22-below weather.



Equipment had to be carried by hand the last half mile up the mountain.



Antenna was erected in a 77-mile gale. Willard Cody, weather observer, Joseph Wiggin, of G-E, and Prof. E. F. Corwin, of R.P.I., do the work.

Snowbound Weather Men See Easter Parade

LAKE PLACID, N. Y.—In the longest distance test yet made of a regular television network program, General Electric television engineers and four weather men saw the Easter Parade on New York City's Fifth Ave. in a weather observatory atop Whiteface Mountain, third highest peak of the Adirondacks, where hurricane winds and 18-below-zero cold greeted the day.

The television signal was carried 250 airline miles by relay from New York City through G-E's relay television transmitter near Schenectady, N. Y., about midway between the origin of the broadcast and Whiteface.

Unexpected hardships were met in carrying the small television set to the 4,872-foot peak, to bring Easter services to three men in the weather station maintained by Rensselaer Polytechnic Institute and New York

University. The men had been snow-bound since Jan. 16.

The five-mile highway up the mountain was drifted with snow to depths of from 10 to 25 feet, and the final mile was crusted with ice. Lake Placid dog team drivers refused to undertake the trip, and the 253-pound load was placed on a toboggan and hauled by four men on snowshoes.

Elbert F. Corwin of R.P.I., director of meteorology station; Willard Cody, chief weather observer; and Alex Smith and Joseph Wiggin, both of General Electric, made the trip in a 6-hour grind, two thirds by moonlight.

First test of the television signal came in strongly the night before Easter. When Easter morning broke, the wind had risen above 100 miles an hour, the temperature had dropped to 18 below zero, and the television engineers were forced to stay over an extra day on the mountain top. Their consolation was the unique experience of seeing and hearing entertainment from New York City in a telecast that will go down in the history books.

Keep Tax Records or Quit, Mich. Merchants Warned

LANSING, Mich.—Merchants who fail to keep accurate and dependable business records will not be permitted to remain in business in Michigan, the State Board of Tax Administration has ruled. The ruling grew out of a discrepancy of \$552,000 in sales tax office records in Detroit.

"There are two groups of merchants who do this," chairman Vernon J. Brown said. "One are the 'smart fellows,' who think they can get a sales tax compromise later. The others don't know how to keep books. We won't spend tax funds tracking them down."

The board also has under consideration a plan to refuse a sales tax license to any merchant delinquent each June 1 in sales tax payments, Mr. Brown said. By law, a merchant must be licensed to make sales at retail in Michigan.

MAYFLOWER

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Compressors
made by
Hardy Manufacturing Co., Inc.
126 Davis Ave., Dayton, O.



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OF THE YEAR!
PACKAGE UNITS
SIX AND NINE FT.
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REX EQUIPMENT CO.
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Are Manufactured in 12 Dif-
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Line for Every Beverage Re-
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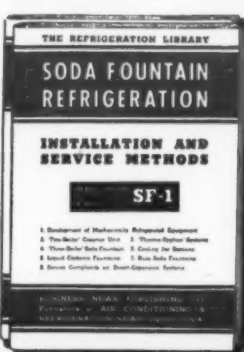
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A set of two new manuals that every service man will want. Installation and service instructions on mechanically refrigerated soda fountains.

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Manual SF-2 Contents: Chapter 9—Bastian-Blessing Fountain with Frigidaire Water Cooler. Chapter 10—Service Complaints and Remedies on Instantaneous Coolers. Chapter 11—Brunswick Fountain with Temprite Instantaneous Cooler. Chapter 12—Accessory Fixtures Multiplexed to Soda Fountains. Chapter 13—Condensing Unit Sizes—Basic Calculation Principles. Chapter 14—Carbonator Construction, Operation, Service Problems. 96 pages. Price \$1.00.

Business News Publishing Co.
5229 Cass Ave., Detroit, Mich.

Date 1940

Gentlemen—Enter subscription to Air Conditioning & Refrigeration News

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Niagara Power Extends 5-Cent Meter Plan To All Dealers

(Concluded from Page 1, Column 3)
making our mistake in selling refrigeration is in constantly working over the upper class prospects, and this produces a buyer's market.

"We must find a way to expand our sales to the great mass of people who don't yet own refrigerators and whom we have passed up because we didn't feel they could afford it."

Describing the low income family as usually consisting of four or five individuals, who generally receive their pay by the day or the week—not the month, Mr. Skinner asserted: "Most of their purchases are made on time and they are in the habit of paying cash instead of using a checking account. They usually rent. They work on a close budget. They don't have much to spend for luxuries. And they are ripe for a sales talk that will show them how to save money."

Roland H. Davison, chairman of the electric refrigeration committee of the Electrical Association, outlined plans for Electric Refrigeration Spring Show Week in Buffalo, April 22 to 27.

"Distributors decided to put on a show this year after a lapse of several years," Mr. Davison declared. "This year the show will be held in every dealer's store—not in a central exhibit space as in former years. We are out to focus public attention on the fact that this is a refrigeration year and our slogan is 'Twice the Value at Half the Price.'"

All dealers and distributors were asked to concentrate their advertising around this idea during the show week, and dealers were requested to dress up their stores with flags, window trim, and floor decorations to create a "Spring Show" atmosphere. Street cars and buses will carry posters advertising the event.

H. D. McCann, vice president of Commercial Credit Co., was also a speaker, describing details of the meter plan.

"We look upon the sale of appliances today as a merchandising matter, not as a banking proposition," Mr. McCann declared. "We too are attempting to make an analysis of the markets."

ASRE To Hold 3-Day Spring Meeting At Skytop June 9-11

(Concluded from Page 1, Column 1)
ist Information, State of Pennsylvania, Harrisburg.

MONDAY, JUNE 10

8:00 a.m.—Registration.

9:00 a.m.—First session: Industrial Refrigeration, L. L. Lewis, chairman. "Refrigeration in the Chemical Industry," D. H. Killeffer, consulting engineer, New York City.

"Freezers for Cold-Pack Fruits," H. J. Mollenberg, Mollenberg-Betz Co., Buffalo, N. Y.

11:00 a.m.—Second session: Commercial Refrigeration, C. R. Logan, chairman.

"Performance of Heat Exchangers," David Crampton, Wallace & Tiernan Co., Belleville, N. J.

"Effect of Superheat on Capacity of Commercial Compressors," R. H. Tull, Westinghouse Electric & Mfg. Co., Springfield, Mass.

1:00 p.m.—Luncheon. A. R. Stevenson, chairman. "Manufacturers vs. Distributors," Robert B. Thomas, attorney at law, New York City.

3:00 p.m.—Golf tournament; bridge for ladies.

7:30 p.m.—Dinner-dance.

TUESDAY, JUNE 11

9:00 a.m.—Third session: Commercial Applications, W. R. Hainsworth, chairman.

"Maintenance of Ice Cream Distribution Equipment," R. A. Brodeser, Southern Dairies, Inc., Washington, D. C.

"Storage of Frozen Vegetables," Donald K. Tressler and Clarence DuBois, New York Agricultural Experiment Station, Geneva, N. Y.

11:00 a.m.—Fourth session: Air Conditioning, George E. Hulse, chairman.

"Design Problems in Distribution of Air," Walter Grant, Carrier Corp., Philadelphia.

"The Problem of the Sales Manager in Air Conditioning," John deB. Shepard, Consolidated Gas, Electric Light & Power Co. of Baltimore.

1:00 p.m.—Council meeting.

Dry Goods Men Oppose Co-op Store Bill

(Concluded from Page 1, Column 5)
tion asserted. "We recognize the right of cooperatives to attempt to establish themselves as a desirable division of our national economy both for the production and the distribution of goods. We do, however, maintain that cooperatives are simply stock or membership corporations organized for profit and are engaged in an effort to produce profit for stockholders or members in the same manner as is any other stock or membership corporation."

Most strenuous objection of the association was leveled at Section 45 of the bill, providing tax exemption.

"Even though narrowly interpreted to mean only District taxes and not other Federal taxes, although the text is not clear on this point, it still is a highly objectionable subsidy for this type of corporation," it was asserted. "It will permit cooperatives to have a huge capital investment in the District, do business in every other state in the Union, and be free of franchise and income taxes and charges upon reserve, even though members or subscribers in the District are few in number and benefit but very little through their operations. This provision should be eliminated from the bill."

Other sections of the proposed law, to which the retailers took issue, included elimination of the cooperatives from all of the anti-trust laws and permitting them to be organized to practice law or other professions, a privilege denied to any other type of corporation.

It's Smelt Time In Wisconsin—And as Usual, the Treat's on Ansul

1915 1940

ANSUL CHEMICAL COMPANY
MARINETTE, WISCONSIN
TELEPHONE 219

25th ANNIVERSARY

Mr. F. M. Cockrell
Electric Refrigeration News
5229 Cass Street
Detroit Mich

Dear Sir:—

SMELT TIME IS HERE AGAIN
and, boy, there are millions of them!

GREETINGS FROM MARINETTE AND THE ANSUL GANG

We have just sent your box of our famous Wisconsin smelt over to the express office. They have been carefully cleaned, washed, and iced, and they should reach you in perfect condition. Please accept them with the sincere good wishes of the whole Ansul gang. Our Wisconsin smelt, with his fancy name of "Osmorus mordax" is a strange fellow. He belongs to the salmon family and looks like a trout. Once a year he swims up from the depths of Green Bay, with millions and millions of his kind, and heads up the Menominee River. (That's the salmon instinct in him.) Then, for about two weeks, starting at 10 p.m., hundreds of people come down to the river to dip smelt. And then it's smelt carnival time in Marinette! You can't come to Marinette (but you'd have a lot of fun if you did), and so we are sending Marinette to you. With the sincere wish that you like your smelt and that your friends will too,

Cordially yours,
ANSUL CHEMICAL COMPANY
H. V. Higley
President

Again the staff of the News acknowledge, with thanks, the receipt of a liberal supply of Wisconsin smelt. We now look forward to Ansul's annual donation when the newspapers report that "the smelt run is on."

Unexpected was the box of frozen chickens, packed in dry ice, sent recently by N. Baraban of Copeland Refrigeration Co., Kansas City, Mo., who sells freezing and storage units specially designed for poultry raisers.

We're beginning to hope that some subscriber will contribute a side of bacon or a sack of spuds. The samples of copper tubing, insulation, etc., usually received are so inedible.

★ ★ ★ ★ ★



Mills Condensing Units
By Mills Novelty Company
4100 Fullerton Ave., Chicago, Ill.

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Dependably Air Conditioning the Stone Shoe Store, Cleveland, Ohio, is the 14 ton Carbondale Compressor installed by the Avery Engineering Company. Valves sold by Harry Alter Company.



"Those are trim slippers, Joan. Where did you get them?"

"Why, at Stone's, of course I get all my shoes there. The store is air conditioned, Marge, and it's a pleasure to shop there."

In retail stores all over the country, A-P Solenoid and Expansion Valves are doing daily duty — DEPENDABLY controlling fine Air Conditioning Installations.

Dependability is built into A-P Valves for ONE reason only — to help YOU make more money. There are many ways to make money, but none is better than a long list of steady, satisfied customers!

A-P Valves help you to keep ALL your customers satisfied. Insist on A-P Valves on ALL your installations.

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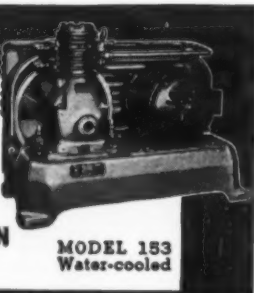
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